Attachment A3

1431 FRANKLIN STREET RESIDENTIAL PROJECT
CEQA ANALYSIS

City of Oakland

Bureau of Planning

250 Frank H. Ogawa Plaza, Suite 2114

Oakland, CA 94612

December 2022

URBAN PLANNING PARTNERS INC.

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I. EXECUTIVE SUMMARY

The purpose of this document is to provide required CEQA review for the proposed project. As such, this document includes:

- A description of the proposed project.
- An assessment of whether the project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15183, as a project that is consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified.
- An assessment of whether the project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15183.3 as qualified infill project.
- An assessment of whether the project qualifies for CEQA streamlining pursuant to CEQA Guidelines Section 15332, as an infill exemption.
- An examination of whether there are project-specific significant effects that are peculiar to the project or its site, and that would necessitate preparation of a subsequent or supplemental Environmental Impact Report (EIR).

Applicable CEQA sections are described further below, each of which separately and independently provide a basis for CEQA compliance.

A. PROJECT OVERVIEW

The 1431 Franklin Street Residential Project (project) proposes to redevelop one parcel on Franklin Street between 14th Street and 15th Street with a residential tower. Table I-1 provides general project information.

TABLE I-1 GENERAL PROJECT INFORMATION

Project Title	1431 Franklin Street
Public Case File Number	PLN20125
Lead Agency Name and Address	City of Oakland Bureau of Planning 250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
Staff Contact	Michele Morris (510) 238-2235 mmorris2@oaklandca.gov

Applicant	TC II 1431 Franklin, LLC 564 Market St, Suite 225, San Francisco, CA 64104 Contact: Ross Stackhouse
Project Address	1431 Franklin Street, Oakland, California 94612
Zoning Designation	CBD-P (Central Business District Pedestrian Retail Commercial Zone) Height Area 7
General Plan Designation	CBD (Central Business District)
APN	8-621-8-7
Lot Size	0.48 acres (20,974 square feet)

The existing 20,974-square-foot parcel is currently occupied by a surface parking lot with approximately 81 parking spaces and is located within the Historic Downtown Area of Primary Importance (API). The proposed residential tower would have 380,443 gross square feet of residential floor area with a maximum height of 399 feet and 6 inches plus mechanical rooftop screening (413 feet and 6 inches at top of mechanical). The tower would include 40 floors consisting of primarily residential use, in addition to an amenity space on the floor six, a pool deck on the top level, and ground-level lobby. The project would accommodate 167 automobile parking stalls in four levels of above-ground podium style parking.

B. SUMMARY OF FINDINGS

An evaluation of the project is provided in the *Chapter V, CEQA Checklist*, below. As described above, this evaluation concludes that the project qualifies for exemptions from additional environmental review. The project was found to be consistent with the development intensity and land use characteristics established by the City of Oakland General Plan, and any potential environmental impacts associated with its development were adequately analyzed and covered by the analysis in the applicable Program EIRs, which are the 1998 Land Use and Transportation Element EIR[1] and the 2011 Central District Urban Renewal Plan Amendments EIR.[2]

The analysis included in this CEQA document supports the determination that each of the applicable CEQA streamlining and/or tiering code sections listed below, separately and independently, provide a basis for CEQA compliance as follows: (1) the proposed project qualifies for an exemption per Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning); (2) the proposed project qualifies for streamlining provisions of CEQA under Public Resources Code Section 21094.5 and CEQA

[1] City of Oakland Community and Economic Development Agency, 1997. Oakland General Plan Land Use and Transportation Element, Draft Environmental Impact Report, October.

[2] Oakland Redevelopment Agency, 2011. Draft EIR for the proposed amendments to the Central District Urban Renewal Plan, March.

Guidelines Section 15183.3 (Streamlining for Infill Projects); (3) the proposed project qualifies to tier off Program EIRs and EIRs prepared for redevelopment projects per CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) as none of the conditions requiring a supplemental or subsequent EIR, as specified in CEQA Guidelines Sections 15162 (Subsequent EIRs) and 15163 (Supplement to an EIR), are present; and (4) the proposed project qualifies for streamlining provisions of CEQA as specified in CEQA Guidelines Section 15332 (Infill Development Projects);.

The project would be required to comply with the applicable mitigation measures identified in the Program EIRs as modified, and in some cases wholly replaced, to reflect the City's current standard language and requirements of its Standard Conditions of Approvals (SCAs), as well as any other applicable City of Oakland SCAs (see Attachment A). With implementation of the applicable SCAs, the project would not result in a substantial increase in the severity of significant impacts that were previously identified in the Program EIRs or any new significant impacts that were not previously identified in the Program EIRs. As a result, no further environmental documentation or analysis is required.

C. DOCUMENT ORGANIZATION

This CEQA Analysis is organized into the following chapters:

Chapter I, Executive Summary: Provides a summary of the project and its findings; and summarizes the organization of the CEQA Analysis.

Chapter II, Background – Program Plans and EIRs: This chapter summarizes the previous environmental documents and their impacts, for which this CEQA Analysis is based upon.

Chapter III, Purpose and Summary of this Document: This chapter describes the several CEQA streamlining and/or tiering provisions and CEQA exemptions under which the project qualifies.

Chapter IV, Project Description: This chapter describes the project site, site development history, proposed development, and required approval process.

Chapter V, CEQA Checklist: This chapter summarizes the analysis, findings, and conclusions of previous Oakland Program EIRs as follows: Oakland's 1998 General Plan Land Use and Transportation Element EIR (1998 LUTE EIR) and the Central District Urban Renewal Plan EIR and Amendments EIR (2011 Renewal Plan EIR). These are referred to collectively throughout this document as the "Program EIRs". This chapter also provides analysis of each environmental technical topic and describes significance criteria, potential environmental impacts and their level of significance, SCAs relied upon to ensure that significant impacts would not occur, and mitigation measures recommended when necessary to mitigate identified impacts.

Attachments: The attachments include applicable SCAs, consistency with applicable CEQA streamlining guidelines, and the technical analyses and data for shadow, wind, air quality, and greenhouse gas emissions, historic resources, traffic-related noise, and the Transportation Demand Management memo.

II. BACKGROUND—PROGRAM PLANS AND EIRS

The project site is addressed in prior City of Oakland planning documents, including the following plans:

- 1998 General Plan Land Use and Transportation Element (LUTE)[3]
- 2011 Central District Urban Renewal Plan Amendments (Renewal Plan)[4]
- 2010 Housing Element (Housing Element)[5]

In addition, the project site is located within the proposed Downtown Oakland Specific Plan area; however, the plan is currently under development and at the time of this analysis has not been formally adopted. For this reason, the Downtown Oakland Specific Plan is not further mentioned in this CEQA Document and is not relied on for this analysis.

An EIR was prepared and certified for each of these planning documents. The following Program EIRs were considered for this CEQA document (and herein are collectively referred to as the "Program EIRs"):

- 1998 Land Use and Transportation Element EIR[6]
- 2011 Central District Urban Renewal Plan Amendments EIR[7]
- 2010 Housing Element Update EIR and 2014 Addendum[8]

Each of these documents is summarized below and hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612 or online at: https://www.oaklandca.gov/resources/completed-environmental-review-ceqa-eir-documents

1. 1998 Land Use and Transportation Element EIR

The City of Oakland certified the EIR for its General Plan Land Use and Transportation Element (LUTE) in 1998.[9] The LUTE identifies policies for utilizing Oakland's land as future changes take place and sets forth an action program to implement its land use policy through development

[3] City of Oakland, 1998a. General Plan: Land Use and Transportation Element, March.
[4] City of Oakland, 2012. Central District Urban Renewal Plan Amendments, April.
[5] City of Oakland, 2014. City of Oakland Housing Element (2015-2023), December 9.
[6] City of Oakland Community and Economic Development Agency, 1997, op. cit.
[7] Oakland Redevelopment Agency, 2011, op. cit.
[8] City of Oakland, 2014. CEQA Addendum for City of Oakland Housing Element (2015-2023), November.
[9] City of Oakland, 1998b. Land Use and Transportation Element, Final EIR, February.

controls and other strategies. The LUTE identifies five Showcase Districts[10] targeted for continued growth; the project site is located within the Downtown Showcase District, which is intended to promote a mixture of vibrant and unique land uses with around-the-clock activity, continued expansion of job opportunities, and growing residential population. The Downtown Showcase District also promotes that "Downtown development should be visually interesting, harmonize with its surroundings, respect and enhance important views in and of the downtown, respect the character, history, and pedestrian-orientation of the downtown, and contribute to an attractive skyline."[11]

The 1998 LUTE EIR is considered a Program EIR per CEQA Guidelines Sections 15168, 15183, and 15183.3. As such, subsequent activities under the LUTE are subject to requirements under each of these CEQA Guidelines sections, which are described further in *Chapter V, CEQA Checklist*. Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other Program EIRs prepared after the 1998 LUTE EIR, either as mitigation measures or newer SCAs, the latter of which are described below in *Chapter V, CEQA Checklist*.

1998 Land Use and Transportation Element EIR Environmental Effects Summary

The 1998 LUTE EIR determined that development consistent with the LUTE would result in impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or SCAs. Mitigation is required for the following resource topics: aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including particulate matter less than 10 microns in diameter] and roadway emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements such as new facilities for trucks, cars, bicycles, and pedestrians, and major improvements to existing facilities such as widening of 98th Avenue and seismic upgrade and reconfiguration of I-880 freeway interchanges); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant); and transportation and circulation (intersection operations).

In the 1998 LUTE EIR, less-than-significant impacts were identified for the following resources: Aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in Downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise Downtown and citywide, multi-family near transportation/transit improvements); population and housing (exceeding household projections,

[10] The five Showcase Districts includes: The Seaport, Downtown, Mixed-Use Waterfront, the Coliseum Area, and the Airport/Gateway.

[11] City of Oakland, 1998a, op. cit.

housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, park services); and transportation and circulation (transit demand). No impacts were identified for agricultural and forestry resources or mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 1998 LUTE EIR: air quality (regional emissions, roadway emissions in Downtown); noise (construction noise and vibration in Downtown); public services (fire safety); transportation and circulation (roadway segment operations); wind hazards; and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

The remaining impacts for applicable resource topics identified in the 1998 LUTE EIR were found to have no significant impacts.

2. 2011 Central District Urban Renewal Plan Amendments EIR

The Central District Urban Renewal Plan (Renewal Plan) was originally adopted by the Oakland City Council on June 12, 1969, and has been subsequently amended or supplemented on several occasions since then – the latest of which was supplemented in 2011 and adopted in 2012 (herein referred to as the "Proposed Amendments"). The City of Oakland prepared and certified an EIR for the Proposed Amendments to the Central District Urban Renewal Plan (Renewal Plan) EIR in 2011 and amended or supplemented the 2011 Renewal Plan up to April 3, 2012. The 2011 Renewal Plan EIR analyzed the environmental impacts of the redevelopment activities associated with implementation of the proposed amendments to the 2011 Renewal Plan.

The 2011 Renewal Plan area generally encompasses the entire Downtown, which is approximately 250 city blocks (828 acres) in an area generally bounded by Interstate (I-) 980, Lake Merritt, 27th Street, and the Embarcadero. The 2011 Renewal Plan was intended to facilitate future redevelopment activity within the project area consistent with the City of Oakland General Plan.

The 2011 Renewal Plan EIR is considered a Program EIR per CEQA Guidelines Sections 15168 and 15183.3. As such, subsequent activities under the Renewal Plan are subject to requirements under each of the aforementioned CEQA Guidelines sections, which are described further in *Chapter V, CEQA Checklist*. Applicable mitigation measures identified in the 2011 Renewal Plan EIR are largely the same as those identified in the other various Program EIRs prepared after the 2011 Renewal Plan EIR, either as mitigation measures or newer SCAs, the latter of which are described below in *Chapter V*.

2011 Central District Renewal Plan EIR Environmental Effects Summary

The 2011 Renewal Plan EIR determined that development facilitated by the proposed amendments would result in impacts to the following resources that would be reduced to a less-than-significant level with the implementation of identified mitigation measures and/or SCAs: aesthetics (light/glare only); air quality (except as noted below as less than significant and significant); biological resources (except no impacts regarding wetlands or conservation plans); cultural resources (except as noted below as significant); geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality (stormwater and 100-year flooding only); noise (exceeding standards – construction and operations only); traffic/circulation (safety and transit only); utilities and service systems (stormwater and solid waste only).

Less-than-significant impacts were identified for the following resources in the 2011 Renewal Plan EIR: aesthetics (except as noted above as less than significant with standard conditions of approval); air quality (clean air plan consistency); hydrology and water quality (except as noted above as less than significant with standard conditions of approval); land use and planning; population and housing; noise (roadway noise only); public services and recreation; traffic/circulation (air traffic and emergency access); and utilities and service systems (except as noted above as less than significant with standard conditions of approval). No impacts were identified for agricultural or forestry resources, and mineral resources.

The 2011 Renewal Plan EIR determined that the proposed amendments combined with cumulative development would have significant unavoidable impacts on the following environmental resources: air quality (toxic air contaminant exposure and odors); cultural resources (historic); and traffic/circulation (roadway segment operations). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

The remaining impacts for applicable resource topics identified in the 2011 Renewal Plan EIR were found to have no significant impacts.

3. Oakland Housing Element Update EIR and 2014 Addendum

The City certified a 2010 EIR plus a 2014 addendum (2010 Housing Element Update EIR) for the Housing Element. The Housing Element identifies the City's current and projected housing needs, and sets goals, policies, and programs to address those needs, as specified by the State of California Regional Housing Needs Allocation process. Applicable mitigation measures and SCAs identified in the 2010 Housing Element Update EIR are considered in the analysis of the residential components in this document. As stated previously, the 2010 Housing Element Update EIR was designated as a Program EIR under CEQA Guidelines Sections 15183 and 15183.3.

As such, subsequent activities under the Housing Element that involve housing are subject to requirements under these CEQA Guidelines sections (see Chapter III for further discussion).

The project site is listed as a housing opportunity site capable of accommodating the City's housing production goals in the 2015-2023 Housing Element. Specifically, the site is identified as opportunity site DJL-17 in Table C-6 of the Housing Element and is listed as having an anticipated number of units between 72 and 86, with an anticipated maximum of 232 dwelling units (prior to application of density bonus) in accordance with the CBD-P zoning designation.

2010 Housing Element Update EIR Environmental Effects Summary

The 2010 Housing Element Update EIR, including its Initial Study Checklist, determined that housing developed pursuant to the Housing Element would result in impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or SCAs (described in Attachment A). Mitigation is required for the following resource topics: Aesthetics (visual character/quality and light/glare only); Air Quality (except as noted below); Biological Resources; Cultural Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials (except as noted below, with no impacts regarding airport/airstrip hazards and emergency routes); Hydrology and Water Quality (except as noted below); Noise; Public Services (police and fire only); and Utilities and Service Systems (except as noted below).

Less-than-significant impacts were identified for the following resources in the Housing Element Update EIR: Hazards and Hazardous Materials (emergency plans and risk via transport/disposal); Hydrology and Water Quality (flooding/flood flows, and inundation by seiche, tsunami, or mudflow); Land Use (except for no impact regarding community division or conservation plans); Population and Housing (except for no impact regarding growth inducement); Public Services and Recreation (except as noted above, and no impact regarding new recreation facilities); and Utilities and Service Systems (landfill, solid waste, and energy capacity only, and no impact regarding energy standards). No impacts were identified for Agricultural and Forestry Resources or Mineral Resources.

Significant unavoidable impacts were identified for the following environmental resources in the Housing Element Update EIR: Air Quality (toxic air contaminant exposure) and Transportation and Circulation (traffic delays). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

III. PURPOSE AND SUMMARY OF THIS DOCUMENT

The purpose of this CEQA document is to evaluate the potential environmental effects of the 1431 Franklin Street Residential Project and to determine whether such impacts were adequately covered under the Program EIRs, referenced above, such that CEQA streamlining and/or tiering provisions and exemptions could be applied. The analysis herein incorporates information from the Program EIRs. It includes a CEQA Checklist (see *Chapter V*) and supporting documentation to provide comprehensive review and public information for the basis of the CEQA determination.

Based on the environmental evaluation—and as the CEQA Checklist included in *Chapter V*, *CEQA Checklist*, demonstrates—the project qualifies for several CEQA streamlining and/or tiering provisions and CEQA exemptions, each of which separately and independently provide a basis for CEQA compliance. These exemptions and applicable provisions of CEQA related to streamlining and/or tiering and CEQA exemptions, as well as applicable standard conditions of approval and CEQA requirements related to aesthetics and parking, are described below.

A. COMMUNITY PLAN EXEMPTION

Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan or Zoning) allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project specific significant effects which are peculiar to the project or its site." Section 15183(c) specifies that "if an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…, then an EIR need not be prepared for the project solely on the basis of that impact."

This analysis considers the evaluation in the 1998 LUTE EIR, 2011 Renewal Plan EIR, and 2010 Housing Element Update EIR and 2014 Addendum for the overall project. This CEQA document concludes that the project would not result in significant impacts that (1) are peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or off-site effects in the Program EIRs; or (3) were previously identified as significant effects but are determined to have a more severe adverse impact than discussed in the Program EIRs. Findings regarding the project's consistency with the zoning are included as Attachment B to this document. The project meets the requirements for a community plan exemption, as it is permitted in the zoning district where the project site is located and is consistent with the land uses envisioned for the site. Thus, based on the analysis conducted in this document, and

pursuant to CEQA Guidelines Section 15183, the project qualifies for a community plan exemption.

B. QUALIFIED INFILL EXEMPTION

Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects) allow streamlining for certain qualified infill projects by limiting the topics subject to review at the project level, if the effects of infill development have been addressed in a planning level decision, or by uniformly applicable development policies. An infill project is eligible if the project (1) is located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; (2) satisfies the performance standards provided in CEQA Guidelines Appendix M; and (3) is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy.

No additional environmental review is required if the infill project would not cause any new specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.

The analysis conducted indicates that the project qualifies for a qualified infill exemption and, pursuant to CEQA Guidelines Section 15183.3, is generally consistent with the required performance standards provided in CEQA Guidelines Appendix M, as evaluated in Attachment C: Infill Performance Standards, Per CEQA Guidelines 15183.3, of this document. This CEQA document supports that the project would not cause any new specific effects or more significant effects than previously identified in applicable planning level EIRs, and uniformly applicable development policies or standards (referred to herein as SCAs) would substantially mitigate the project's effects. The project is proposed on a previously developed site in downtown Oakland and is surrounded by urban uses. Furthermore, the project is consistent with the land use, density, building intensity, and applicable policies for the site. The analysis herein considers the analysis in the 1998 LUTE EIR, 2011 Renewal Plan EIR, and 2010 Housing Element Update EIR and 2014 Addendum.

Cumulative level effects of infill development have been addressed in other planning level documents, such as the LUTE and 1998 LUTE EIR, Redevelopment Plan and 2011 Redevelopment Plan EIR, Housing Element and 2011 Renewal Plan EIR and, or by uniformly applicable development policies (SCAs) which mitigate such impacts. Based on the streamlining provisions of CEQA Guidelines Sections 15183 and 15183.3, the project's cumulative effect would be less than significant.

C. PROGRAM EIRS AND REDEVELOPMENT PROJECTS

CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) provide that the 1998 LUTE EIR, 2011 Renewal Plan EIR, and 2010 Housing Element Update EIR and 2014 Addendum can be used as Program EIRs in support of streamlining and/or tiering provisions under CEQA. The 2011 Renewal Plan EIR is a Program EIR for streamlining and/or tiering provisions by CEQA Guidelines Section 15168. The section defines the Program EIR as one prepared on a series of actions that can be characterized as one large project and are related geographically and by other shared characteristics. Section 15168 states that "subsequent activities in the Program EIR must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared." If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur, or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the Program EIR and no new environmental document would be required.

Further, CEQA Guidelines Section 15180 specifies that "if a certified redevelopment plan EIR is prepared, no subsequent EIRs are required for individual components of the redevelopment plan unless a subsequent EIR or supplement to the EIR would be required by Section 15162 or 15163." The 2011 Renewal Plan EIR is considered a certified redevelopment plan.

Overall, based on an examination of the analysis, findings, and conclusions of the 1998 LUTE EIR the 2011 Renewal Plan EIR, and 2010 Housing Element Update EIR and 2014 Addendum, all of which are summarized in the CEQA Checklist in *Chapter V* of this document, the potential environmental impacts associated with the project have been adequately analyzed and covered in the Program EIRs. This analysis demonstrates that the project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162 or 15164, because the level of development now proposed for the site is within the broader development assumptions analyzed in the Program EIRs. Therefore, no further review or analysis under CEQA is required.

D. CLASS 32 CATEGORICAL EXEMPTION

Public Resources Code Section 21159.21 and CEQA Guidelines Section 15300 to Section 15333 includes a list of classes of projects that have been determined to not have a significant effect on the environment and as a result, are exempt for review under CEQA. Among the classes of projects that are exempt from CEQA review are those projects that are specifically identified as urban in-fill development. CEQA Guidelines Section 15332 (Class 32) consists of projects characterized as in-fill development when meeting the following conditions: a) the project is consistent with the applicable zoning designation and regulations; b) the proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; c) the project site has no value as habitat for endangered, rare, or threatened species;

d) approval of the project would not result in any significant effects related to traffic, noise, air quality, or water quality; and e) the site can be adequately served by all utilities and public services. The project's consistency with Class 32 requirements is provided in Attachment D.

E. PREVIOUS MITIGATION MEASURES AND CURRENT STANDARD CONDITIONS OF APPROVAL

As described above, the CEQA Checklist provided in *Chapter V* of this document evaluates the potential project specific environmental effects of the project and evaluates whether such impacts were adequately covered by the Program EIRs previously described in *Chapter II, Background-Program Plans and EIRs*, to allow the above-listed provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in each of the Program EIRs. The project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the Program EIRs. Therefore, the mitigation measures are herein assumed to be included as part of the project, including those that have been modified to reflect the City's current standard language and requirements, as discussed below.

1. Standard Conditions of Approval Application in General

The City of Oakland established its Standard Conditions of Approval (SCAs) and Uniformly Applied Development Standards in 2008 after certification of the 1998 LUTE EIR. They have since been amended and revised several times. The most recent version of the SCAs was published by the City on December 16, 2020. The City's SCAs are incorporated into and applied to new and changed projects as conditions of approval, regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (e.g., Oakland Planning Code and Municipal Code, Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Tree Protection Ordinance, Grading Regulations, National Pollutant Discharge Elimination System [NPDES] permit requirements, Housing Element-related mitigation measures, California Building Code and Uniform Fire Code). The implementation of these policies and standards have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and would, substantially mitigate environmental effects.

Consistent with the requirements of CEQA, a determination of whether the project would have a significant impact was made prior to the approval of the project and, where applicable, SCAs and/or mitigation measures in the Program EIRs have been identified to mitigate those impacts. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies, an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified; where subsequent compliance with identified

federal, state, or local regulations or requirements apply; where specific performance criteria are specified and required; and where the project commits to developing measures that comply with the requirements and criteria identified.

2. Standard Conditions of Approval Application in this CEQA Document

Several SCAs would apply to the project because of its characteristics and are triggered by the City of Oakland's consideration of a discretionary action for the project. Because the SCAs are mandatory City requirements, the impact analyses for new and modified projects assumes that all applicable SCAs will be imposed and implemented by the project in question.

All mitigation measures and applicable SCAs for the project are listed in Attachment A: Mitigation Measures and Standard Conditions of Approval and Reporting Program, of this document. Some of the SCAs identified in this document apply to the project and were also identified in the 2011 Renewal Plan EIR, 1998 LUTE EIR, and 2010 Housing Element Update EIR and 2014 Addendum prior to the City's application of SCAs; however, the project would be subject to the most recent version of City SCAs.

Aesthetics and Parking Analysis

CEQA Guidelines Section 21099(d) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment."[12] Accordingly, aesthetics and parking, for such projects, are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

- The project is in a transit priority area.[13]
- The project is on an infill site.[14]
- The project is residential, mixed-use residential, or an employment center.

The project meets each of the above three criteria because it: (1) is located within approximately 500 feet (less than 0.1 miles) of the 12th Street Oakland Bay Area Rapid Transit District (BART) Station and the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (Route 6 with 10-minute peak headways, Route 18 with 15 minute peak headways, Route 51A with 10-minute peak

[12] CEQA Guidelines Section 21099(d)(1).

[13] CEQA Guidelines Section 21099(a)(7) defines a "transit priority area" as an area within 0.5-mile of an existing or planned major transit stop. A "major transit stop" is defined in CEQA Guidelines Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[14] CEQA Guidelines Section 21099(a)(4) defines an "infill site" as a lot located within an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses

headways, and Routes 72/72M/72R with 10- to 12-minute peak headways prior to the COVID-19 pandemic); (2) is located on an infill site that is currently developed with a surface parking lot, and within a developed urban area of Oakland that includes commercial, office and residential uses; and (3) would be residential project.

Therefore, this CEQA document does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA. The City of Oakland recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects and may desire that such information be provided as part of the environmental review process. Parking is not generally considered for CEQA purposes; however, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to CEQA Guidelines Section 21099(d).

IV. PROJECT DESCRIPTION

This chapter describes the proposed 1431 Franklin Street Residential Project that is the subject of this CEQA document. This chapter provides a description of the project site and existing site conditions, discusses the project details and characteristics, and lists the required project approvals.

A. PROJECT SITE

A description of the project site, including its location site characteristics, surrounding land uses, and existing general plan and zoning designation, is provided below.

1. Location

The project site is in Downtown Oakland on Franklin Street between 14th and 15th streets. It is bounded by several 1- to 4-story older commercial structures to the north and south, a 10-story building to the west, an 18-story building to the southwest, and another surface parking lot across the street to the east. The project site is well served by extensive public transit options. Access to the 12th Street Oakland BART Station is available to the west on Broadway at the corner of 14th and 13th streets; access to the Tempo Bus Rapid Transit line 1T is available to the west on Broadway and 14th streets; access to several Alameda County Transit (AC Transit) routes including the 6, 12, 18, 33, 51A, 611, 800, 840, 851; the Broadway Shuttle; and other numerous dedicated bike lanes and connections in the surrounding area. The project site is accessed regionally by vehicle from I-980 and I-880, both with access within a mile of the site.

Figure IV-1 illustrates the location and context of the project site.

2. Existing General Plan and Zoning Designation

The City of Oakland General Plan[15] land use classification for the site, as established by the Land Use and Transportation Element (LUTE), is Central Business District (CBD). The intent of the CBD designation is to encourage, support, and enhance the downtown area as a high-density, mixed-use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation in Northern California. A discussion of the project's consistency with relevant land use policies is provided in *Section V.J, Land Use, Plans, and Policies*. Furthermore, as described above and in the LUTE, the project site is located in the Downtown Showcase District which is intended to promote Downtown

[15] City of Oakland, 1998a, op. cit.

Figure IV-1
Project Location

development to be visually interesting, harmonize with its surroundings, respect and enhance important views in and of the downtown, respect the character, history, and pedestrian-orientation of the downtown, and contribute to an attractive skyline.

The project site is within the Central Business District Pedestrian Retail Zone (CBD-P), which is intended to enhance the Central Business District through ground-floor pedestrian-oriented, active storefront uses. The parcel is also within the CBD Height Area 7, which permits unlimited height and a maximum floor area ratio (FAR) of 20.0. A more detailed discussion of the project's consistency with relevant land use policies is provided in *Section V.J, Land Use, Plans, and Policies*.

3. Surrounding Land Uses

The project site is within a well-developed, urban, downtown environment with a mix of land uses surrounding the project site, as shown in Figure IV-2. To the north, existing uses include a college (Lincoln University), several commercial buildings (restaurant and offices), and some above ground floor residential uses. Existing uses to the south primarily includes commercial buildings and some above ground floor residential uses. To the west is a 10-story office building with ground-floor retails spaces and an 18-story office building to the southwest. Existing uses to the east opposite Franklin Street include a surface parking lot and several other commercial buildings. Lake Merritt is approximately 2,250 feet northeast of the project site. A more detailed discussion of existing and planned land uses is provided in *Section V.J, Land Use, Plans, and Policies*.

The project site is located within 0.25-mile from numerous historic resources, all of which are described below in *Section V.D, Cultural and Historic Resources*. The project site is also located within the Downtown Historic District Area of Primary Importance (API). An API is a historically or visually cohesive area or property group identified by the Oakland Cultural Heritage Survey (OCHS) which usually contains a high proportion of individual properties with ratings of "C" or higher. Additionally, the project is located within the vicinity of several other APIs —the Leamington Hotel Group, Uptown Commercial, and Lake Merritt APIs — are located near the project area. A more detailed discussion of historic resources is provided in *Section V.D, Cultural and Historic Resources*.

4. Site Characteristics

The project site is urban in character and is currently developed with an approximately 20,974 square feet surface parking lot containing approximately 81 parking spaces and a guard shack. The project site is approximately 0.48 acres (20,974 square feet) and is comprised of a single parcel:

- **1431 Franklin Street** (Assessor's Parcel Number [APN] 8-621-8-7)

The project site is under single, private ownership and is not on the list of hazardous waste and substance sites compiled pursuant to Government Code Section 65962.5 (Cortese list).

Figure IV-2
Project Site

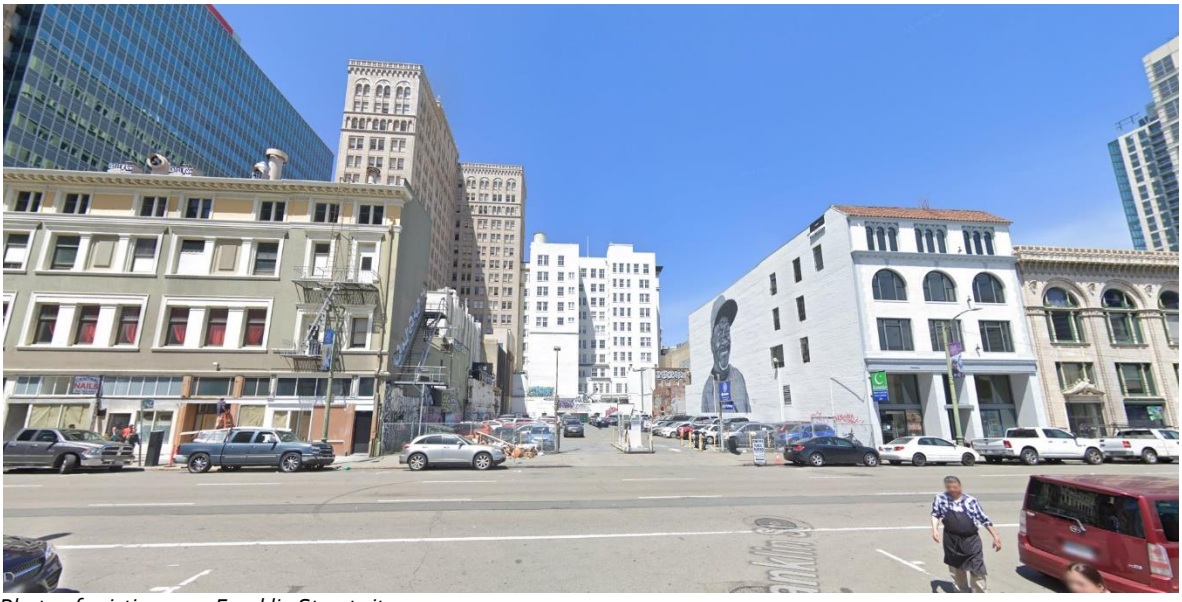


Photo of existing 1431 Franklin Street site.

Sidewalks line the east (Franklin Street) frontages of the project site. A driveway along Franklin Street provides vehicle access to the site through a driveway along Franklin Street. There is currently no existing landscaping along the Franklin Street frontage. There is a bike lane along the east side of Franklin Street.

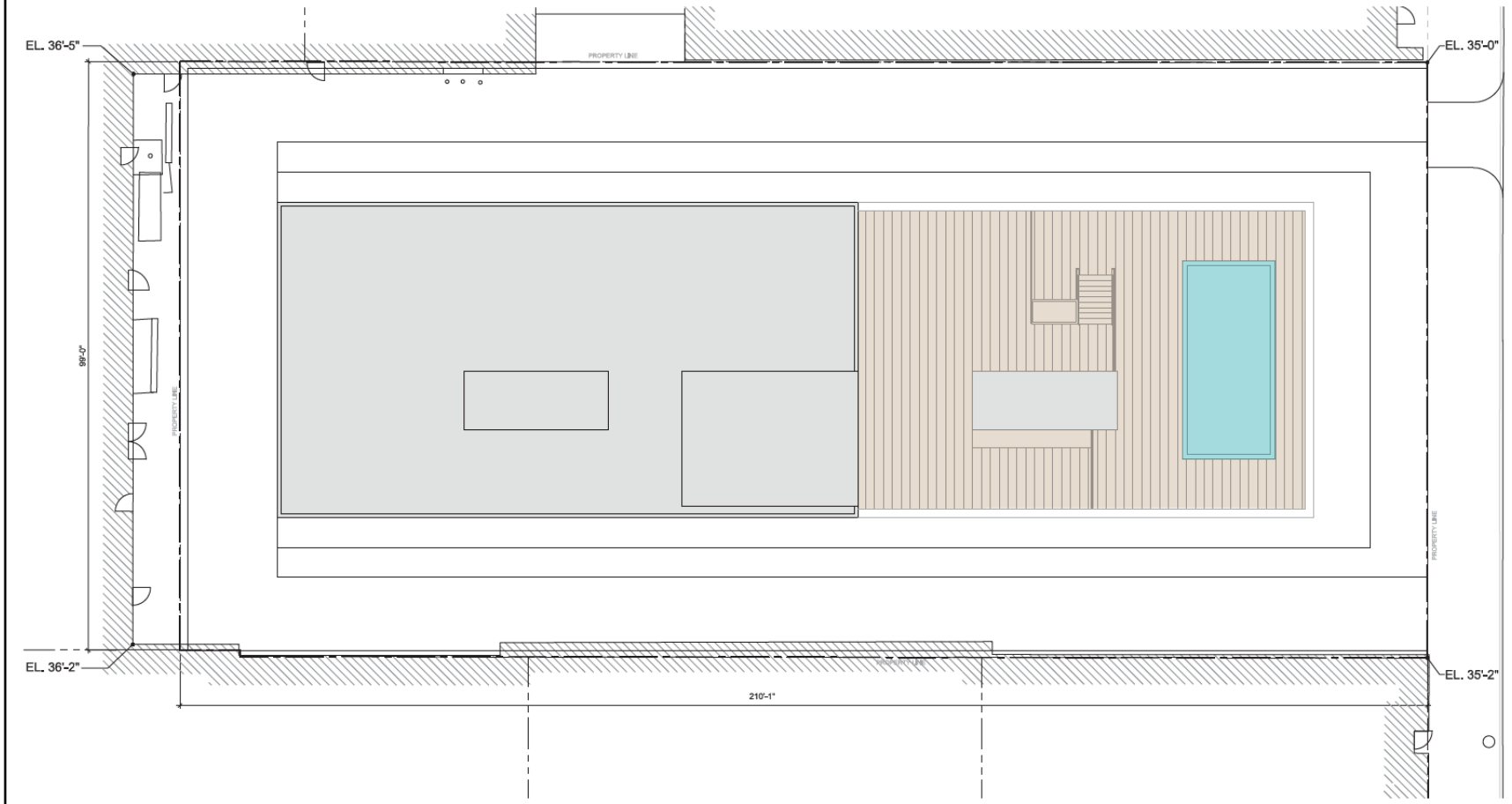
3. Project Characteristics

A description of the project, including the proposed development characteristics, circulation and parking, landscaping and streetscape, utilities and infrastructure improvements, and demolition and site preparation, is provided below.

a. Development Characteristics

The project would involve construction of 381 residential units (38 of which would be affordable) in a 399.5-foot-tall building (413 feet at top of mechanical penthouse), with 40 floors and approximately 518,930 gross square feet. The project's footprint of would cover 100 percent of the project site's 20,974 square feet.

Uses on the site would include residential, automobile parking, bike parking, residential lobby, and private and group-usable open space. The project's site plan is shown in Figure IV-3 and renderings of the building are shown in Figures IV-4 through IV-6. Approximately 380,443 square feet would be dedicated to residential space, which would be the dominant use; 74,510 square feet for auto parking; 43,592 square feet to open space (27,692 square feet of group useable open space and 14,900 square feet of private open space); approximately 7,130 square feet of ground floor space would be for the residential lobby; and approximately 14,255 square feet dedicated to



Source: LARGE Architecture, 2022.

Figure IV-3
Site Plan

Source: LARGE Architecture, 2022.

Figure IV-4
Rendering - View Looking Southwest

Source: LARGE Architecture, 2022.

Figure IV-5
Rendering - View Looking Northwest

Figure IV-6
Rendering - Ground-level Façade

other auxiliary and support uses. The project FAR would be 19.16.[16] These project characteristics are summarized below in Table IV-1 and shown in Figure IV-7.[17]

TABLE IV-1 PROJECT CHARACTERISTICS

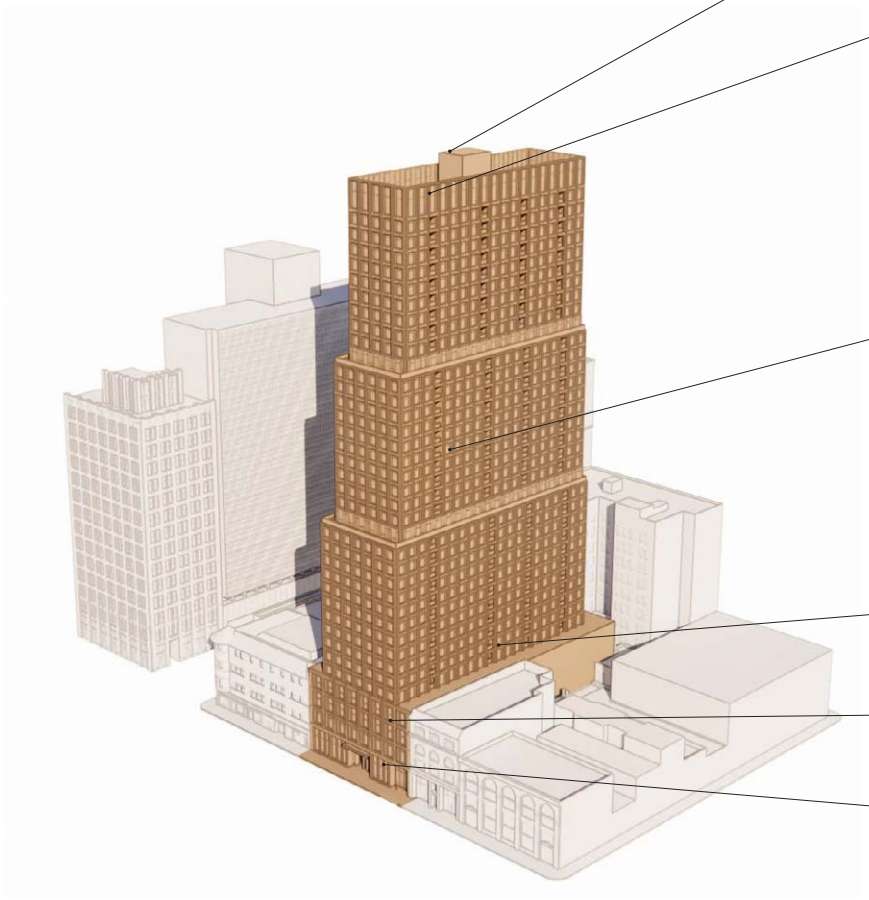
Characteristic	Proposed Project
Floor Area Ratio	19.16
Height	
Floors	40
Height in Feet	399'-6" (at roof) / 413' (top of mechanical)
Proposed Uses (gsf)	
Residential	380,443
Parking	74,510
Group-Usable Open Space	27,692
Lobby	7,130
Private Open Space	14,900
Total GSF	518,930
Proposed Parking (number of spaces)	
Vehicle Parking Space	167
Bicycle Parking Spaces	116 (96 long term/20 short term)

Note: gsf = gross square feet. The total gross square feet does not include private open space totals.
Source: Tidewater Capital, 2022.

As shown in Figure IV-8, the ground floor would consist of the building lobby, leasing office, the elevator lobby, vehicle circulation, and building support uses such as mechanical and electrical equipment, trash areas, and a loading dock. Floors 2 through 5 would consist entirely of vehicular parking area and are shown in Figures IV-9 through IV-11. The sixth level of the building would contain approximately 14,167 square feet of amenity spaces as shown in Figure IV-12. Levels 7 through 39 would consist of residential spaces, of which is shown in Figures IV-13 through IV-15. These residential floors would include the 381 residential units, of which 64 would be studio units, 148 one-bedrooms, 150 two-bedrooms, and 19 three-bedrooms. The topmost floor, floor 40, contains approximately 5,425 square feet dedicated for the pool deck, is shown in Figure IV-16, and the roof plan is shown in Figure IV-17.

[16] FAR only considers residential, retail, lobby, and some support space uses per Oakland Municipal Code 17.09.040. Therefore the project's total considerable FAR total is 341,480 square feet.

[17] At the time of the publication of this CEQA document, multiple scenarios were being contemplated for the project. The air quality and transportation analysis therefore consider the maximum development potential for the project site at the maximum allowed FAR of 20.0 in order to encapsulate a "worst-case" scenario. This worst-case scenario is described in those respective resource topic sections.



MECHANICAL

ROOFTOP AMENITY
indoor and outdoor amenities on roof



381 RESIDENTIAL UNITS



BUILDING AMENITY

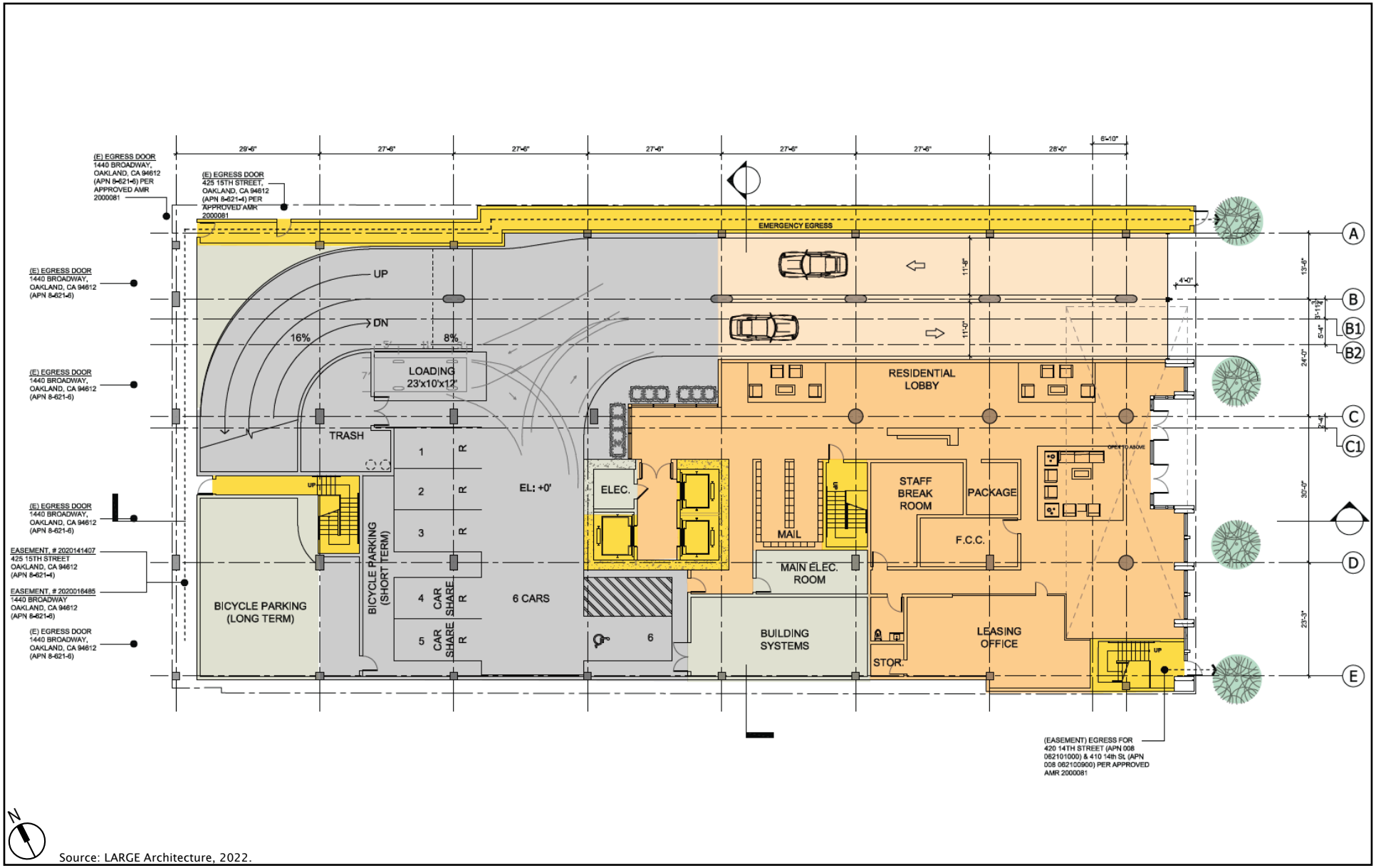
PARKING GARAGE
167 stalls of 4 floors

LOBBY
Res lobby and back of house



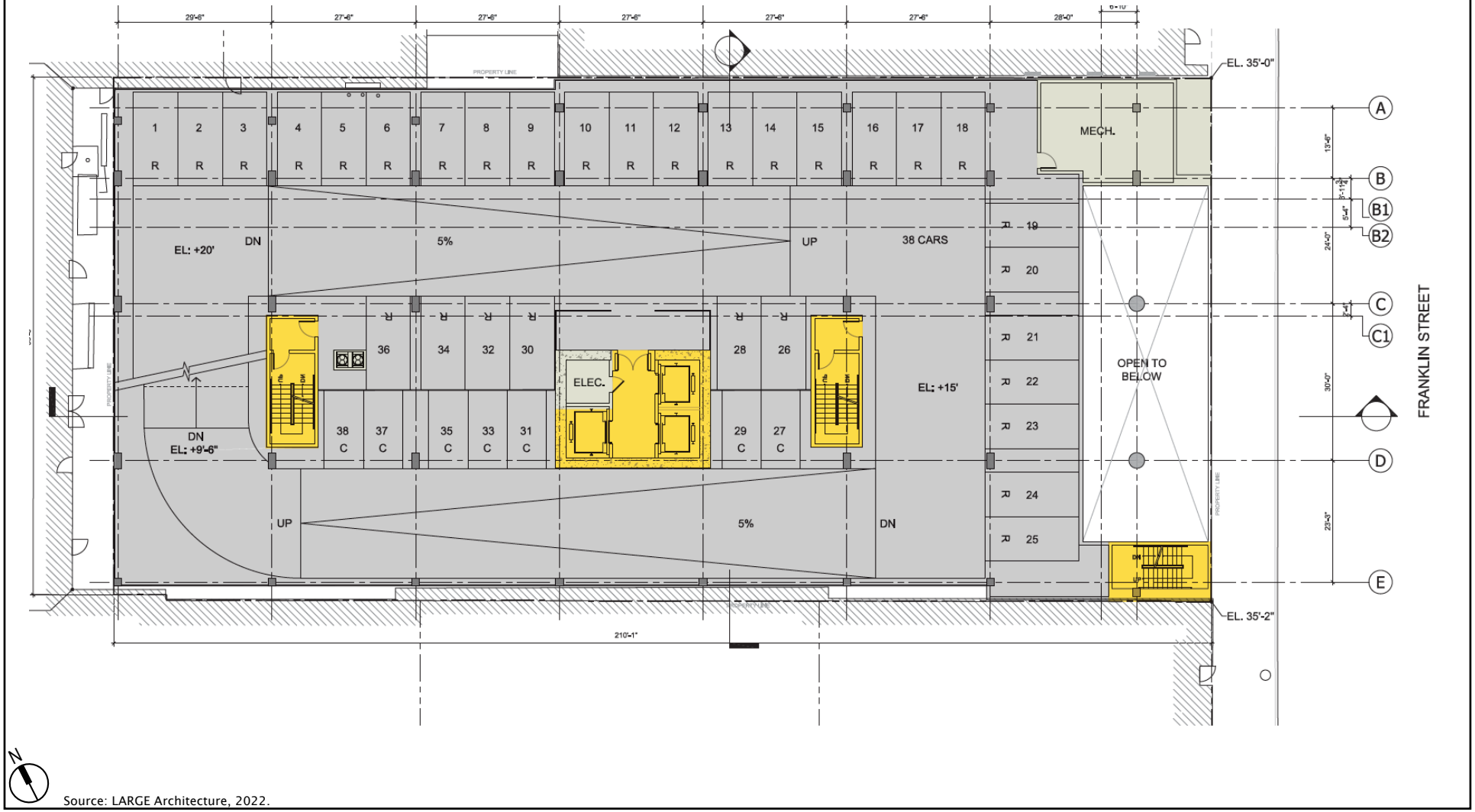
Source: LARGE Architecture, 2022.

Figure IV-7
Program Diagram



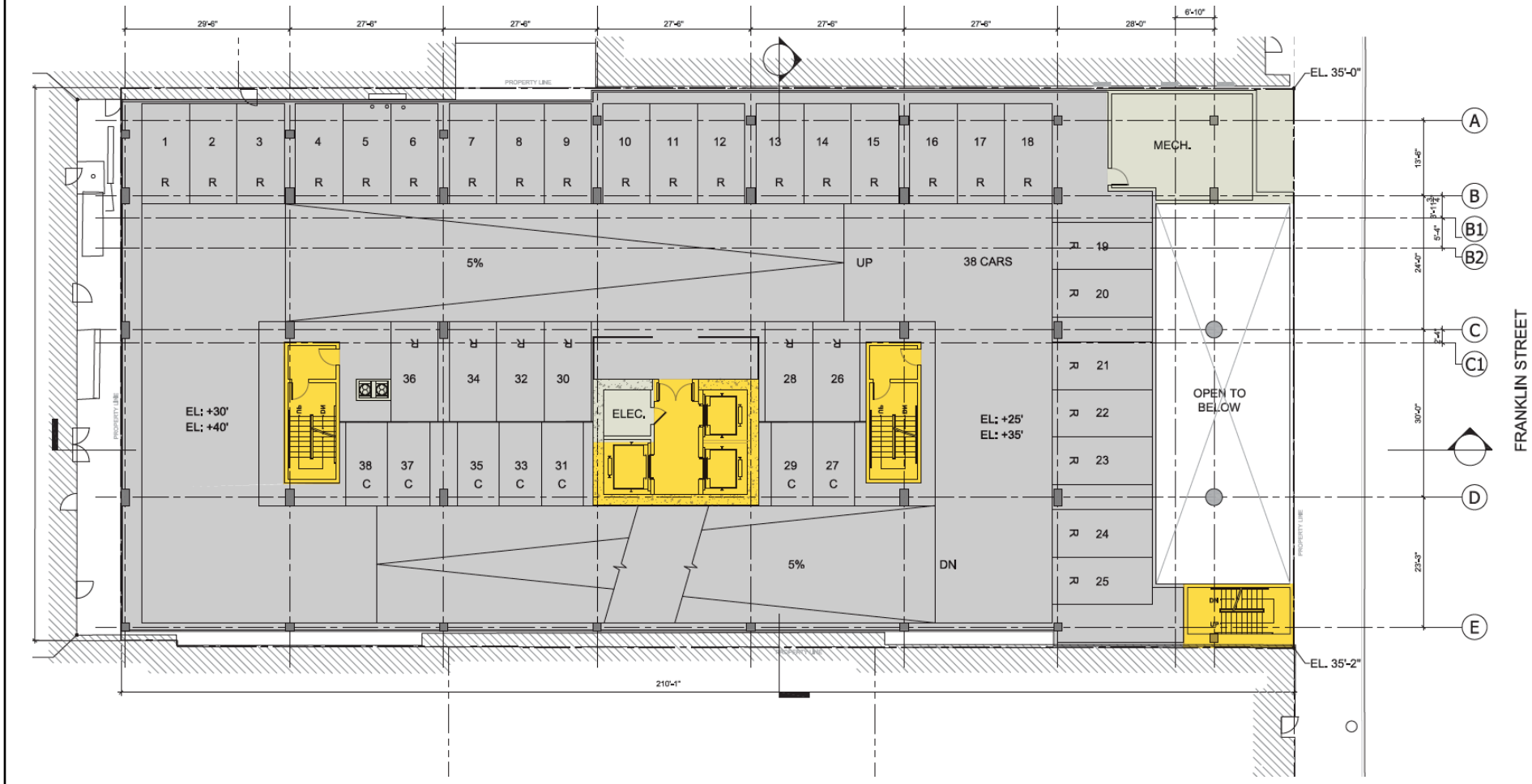
Source: LARGE Architecture, 2022.

Figure IV-8
Ground Floor Plan



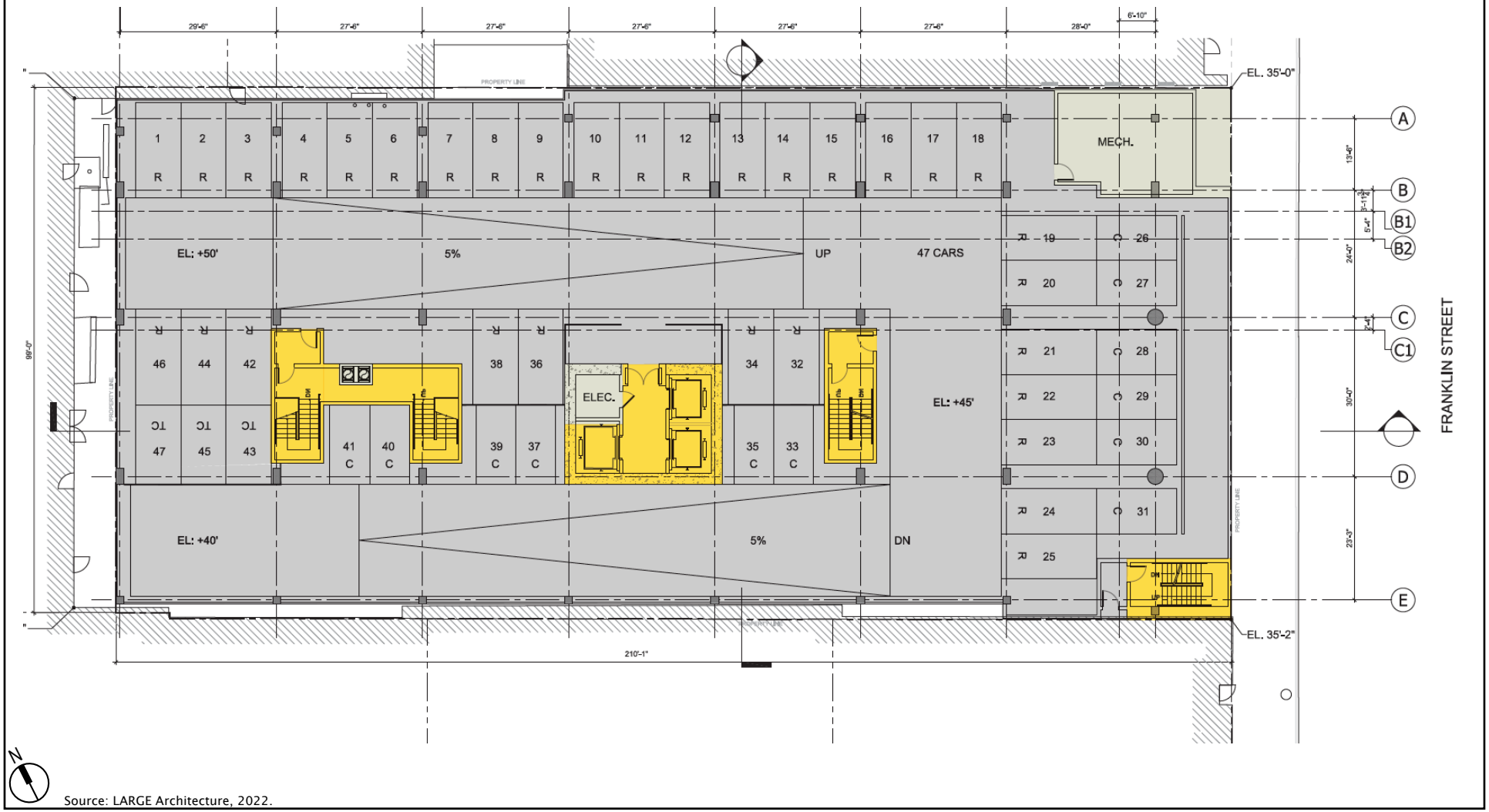
Source: LARGE Architecture, 2022.

Figure IV-9
Parking Floor Plan (Level 2)



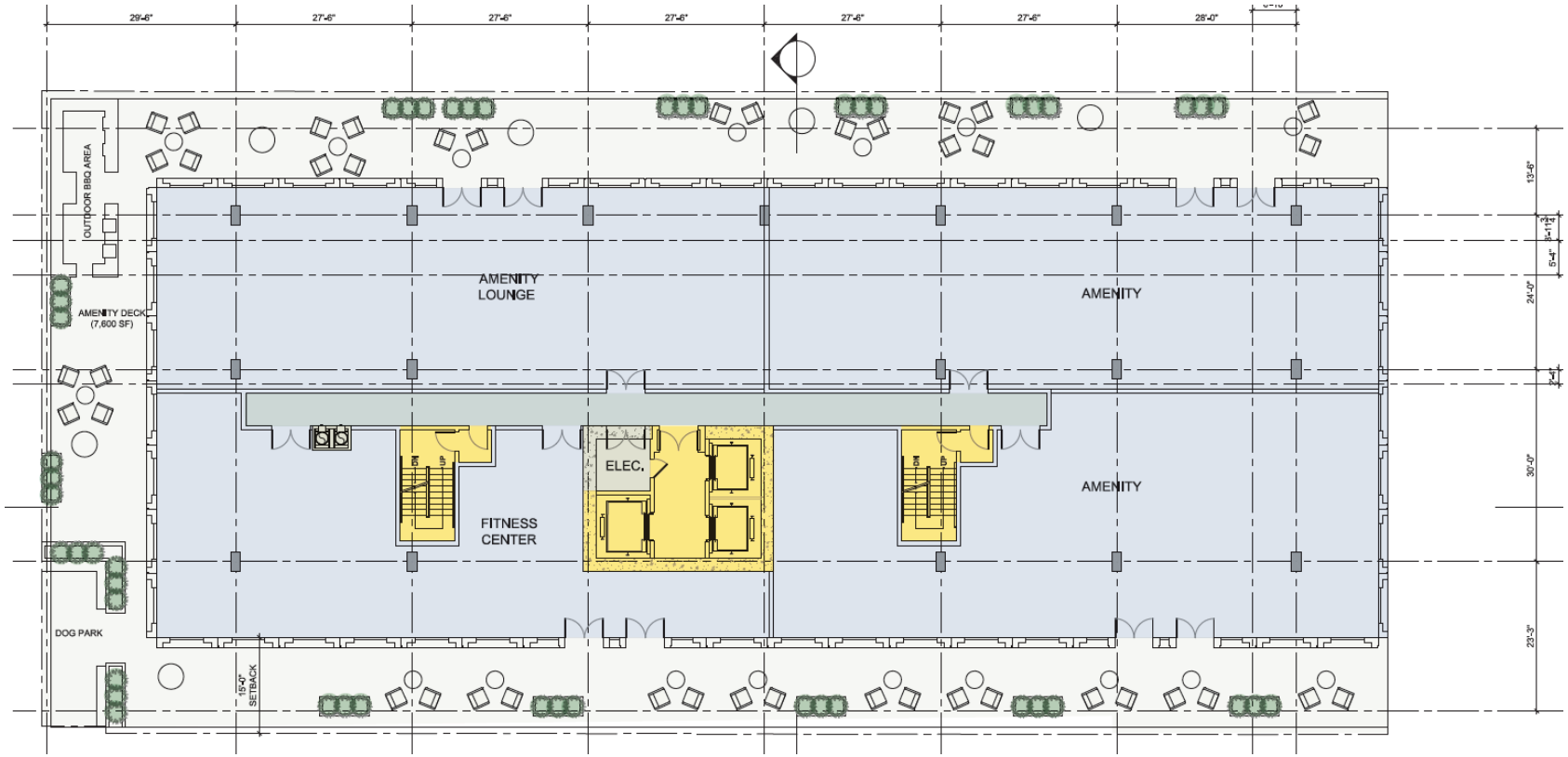
Source: LARGE Architecture, 2022.

Figure IV-10
Parking Floor Plan (Levels 3 and 4)



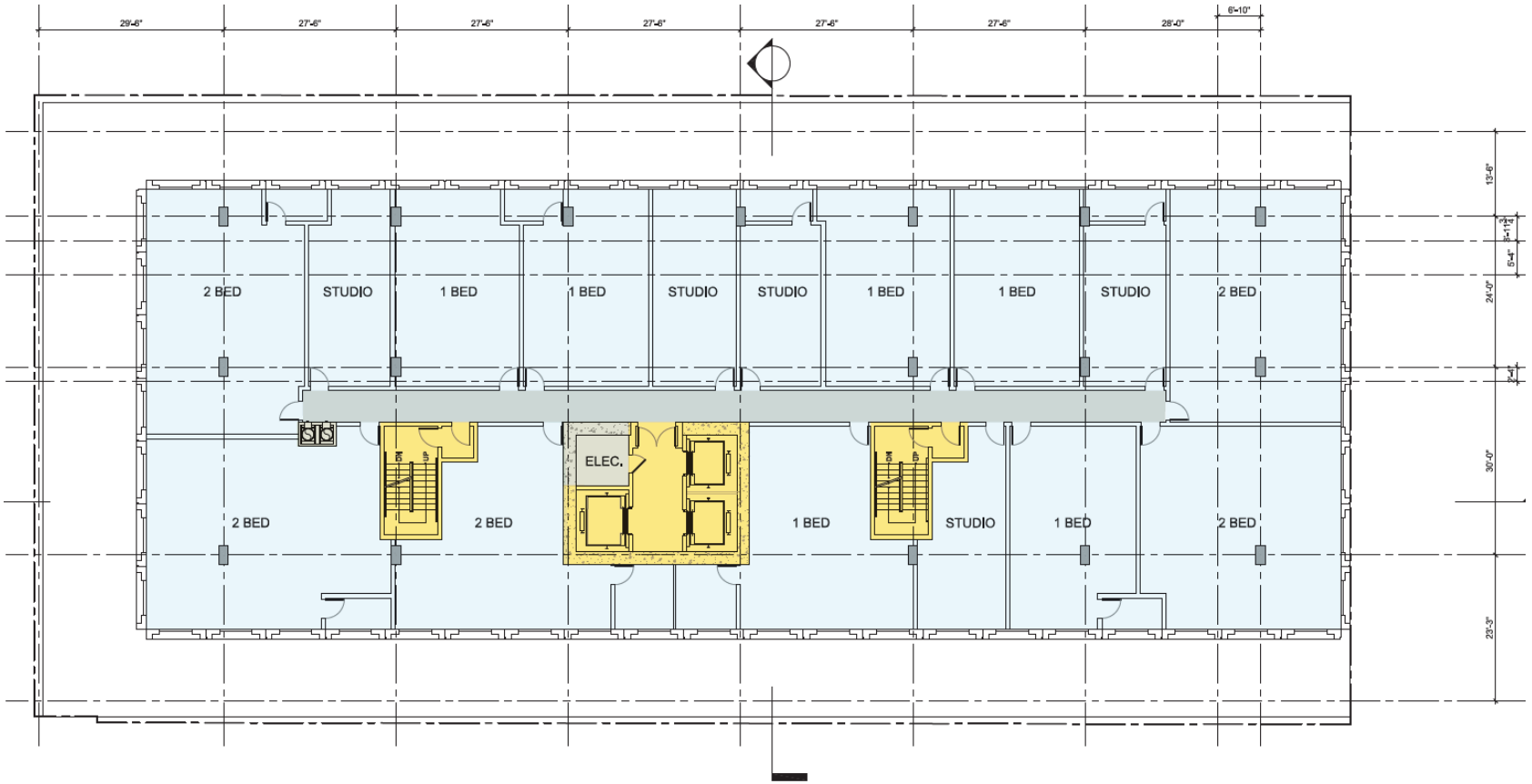
Source: LARGE Architecture, 2022.

Figure IV-11
Parking Floor Plan (Level 5)



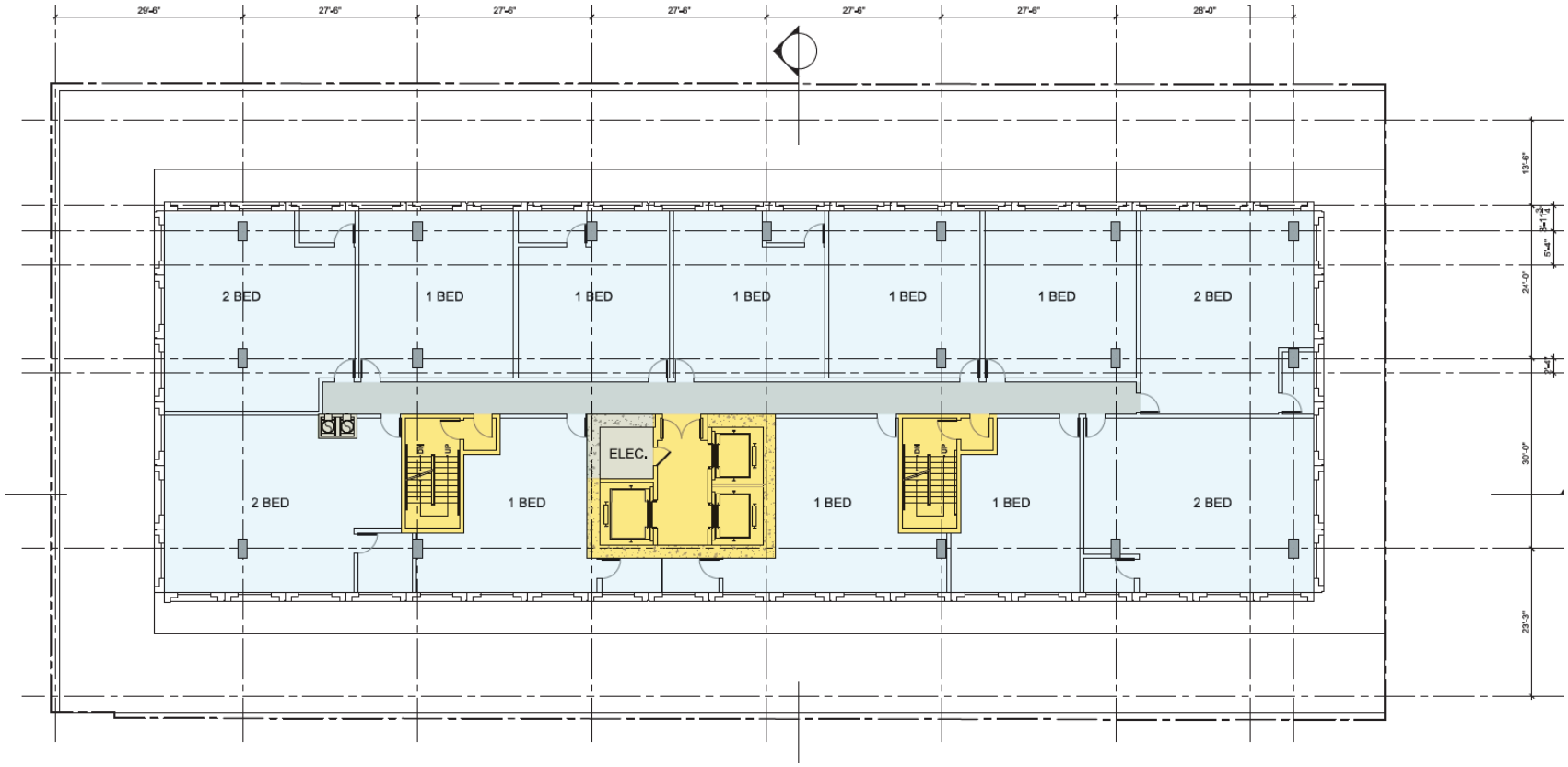
Source: LARGE Architecture, 2022.

Figure IV-12
Amenity Floor Plan (Level 6)



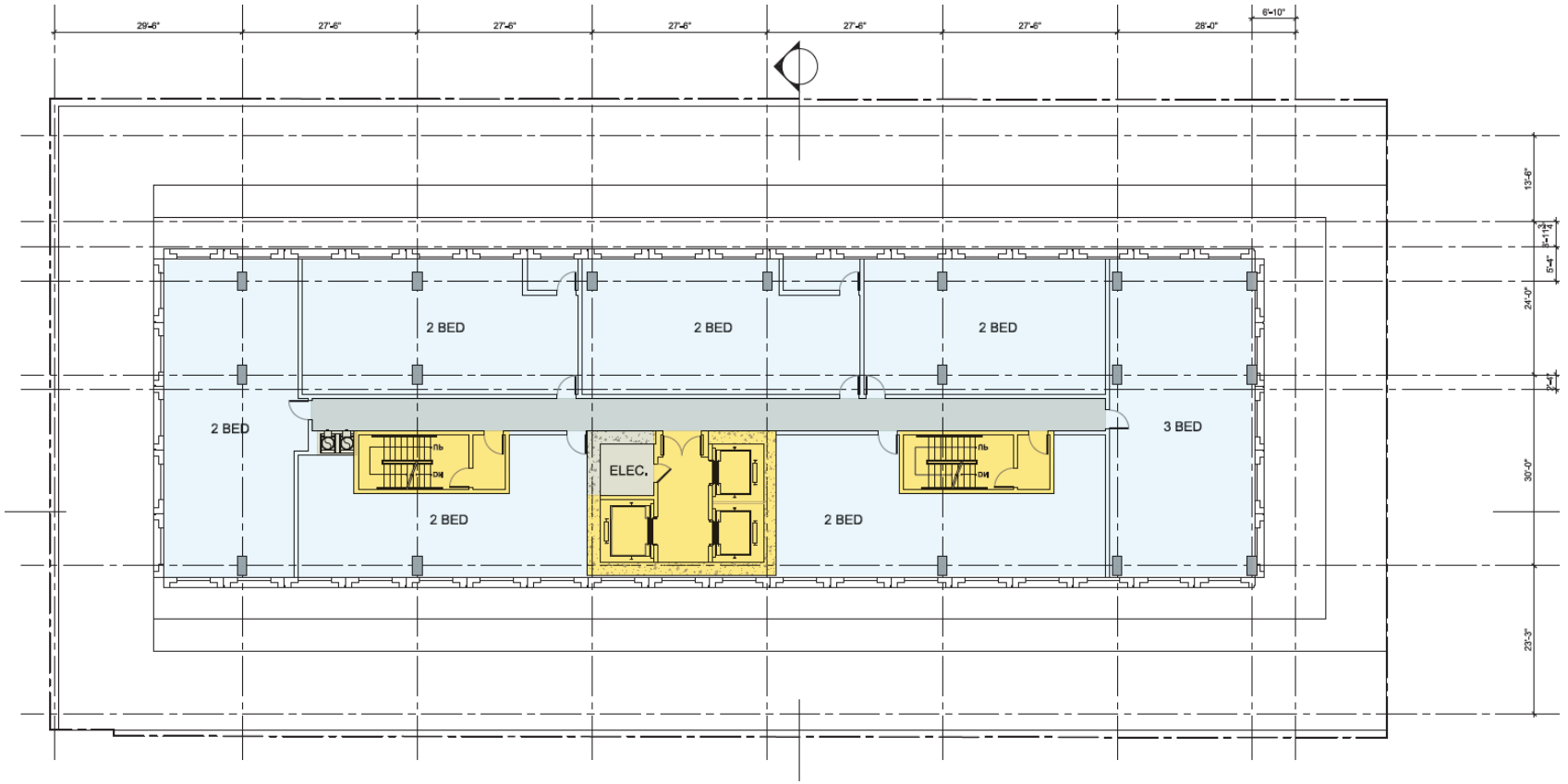
Source: LARGE Architecture, 2022.

Figure IV-13
Typical Residential Floor Plan (Lower Levels)
1431 Franklin Street Residential Project



Source: LARGE Architecture, 2022.

Figure IV-14
Typical Residential Floor Plan (Middle Levels)
1431 Franklin Street Residential Project



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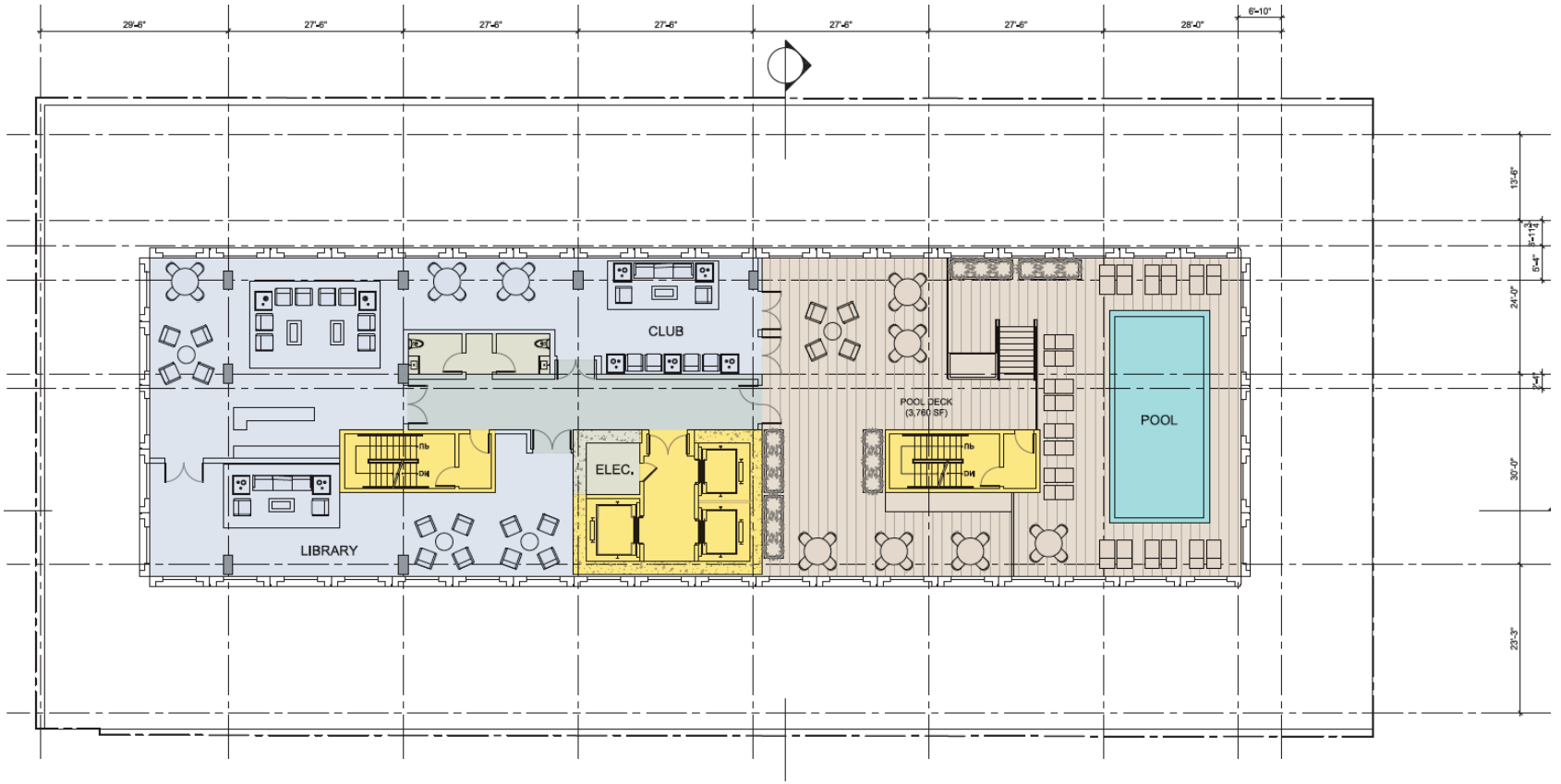
Source: LARGE Architecture, 2022.

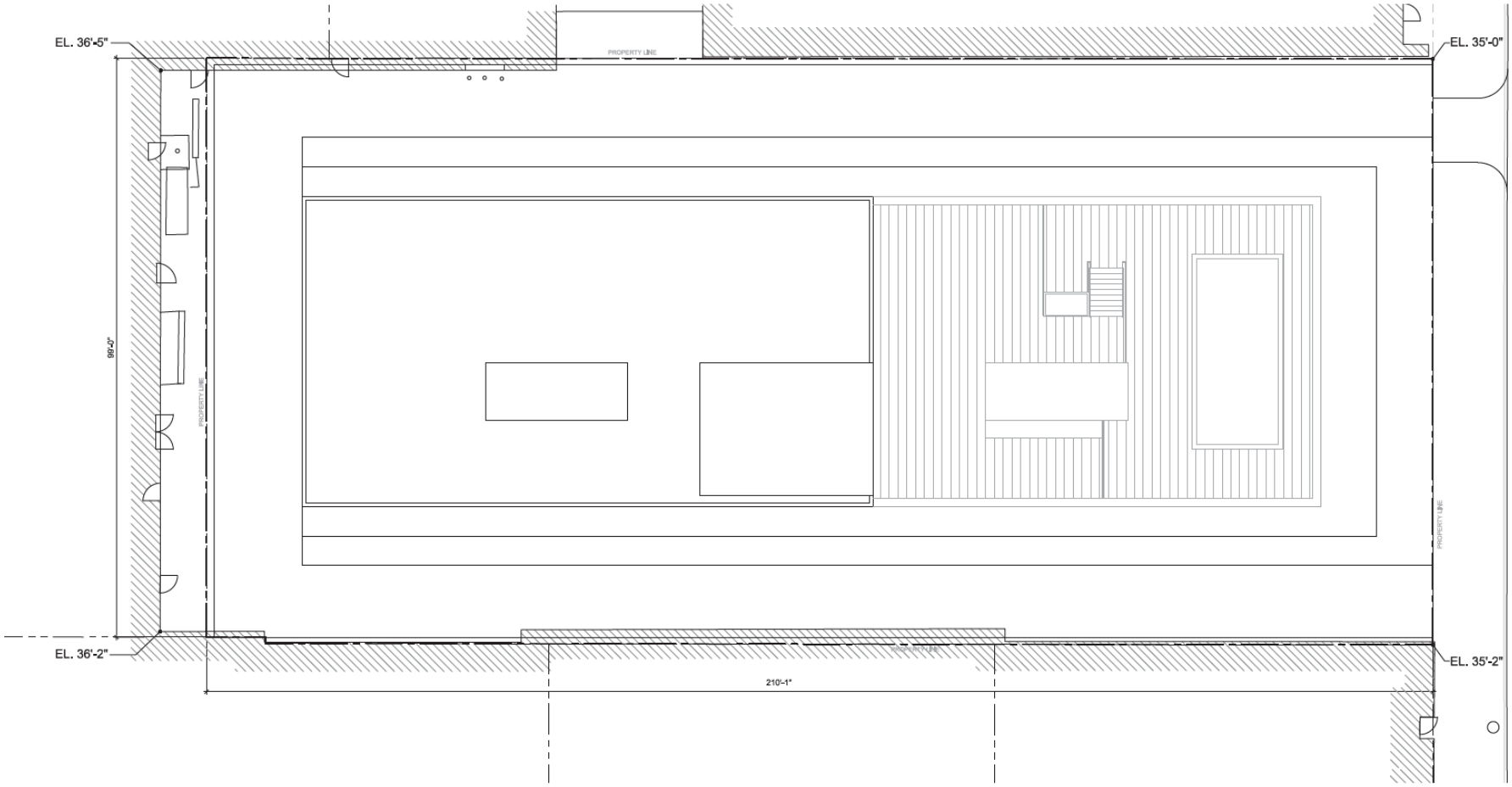
Figure IV-15
Typical Residential Floor Plan (Upper Levels)

1431 Franklin Street Residential Project



Source: LARGE Architecture, 2022.

Figure IV-16
Roof Deck Floor Plan



Source: LARGE Architecture, 2022.

Figure IV-17
Roof Plan

A section of the building is shown in Figure IV-18. Project elevations displaying these three sections are provided in Figures IV-19 and IV-20.

b. Density Bonus

The project proposes to set aside at 15 percent of the base project units (38 units of 254 base units) for very-low Income households (or under 50 percent local area median income). Under the California State Density Bonus law, a project including this level of affordability is entitled to: (a) a 50-percent density bonus above the maximum allowable residential density under the City's General Plan and Planning Code standards for the CBD-P zone; (b) three concessions/incentives; and (c) waivers of development standards that would preclude development of the project at the bonus density.[18] The Density Bonus would allow an increase in the total number of units allowed on site up to 381 residential units. No concessions or waivers are required to achieve this density bonus.

c. Circulation and Parking

The project site would have one vehicle access point along Franklin Street for entry and exit to the parking levels. The project includes a total of 167 automobile parking spaces on levels two through five. A total of 20 short-term and 96 long-term bicycle parking spaces would be provided on the ground floor of the building. One loading bay would be located on the ground floor. No changes to the existing street parking along Franklin Street are proposed by the project.

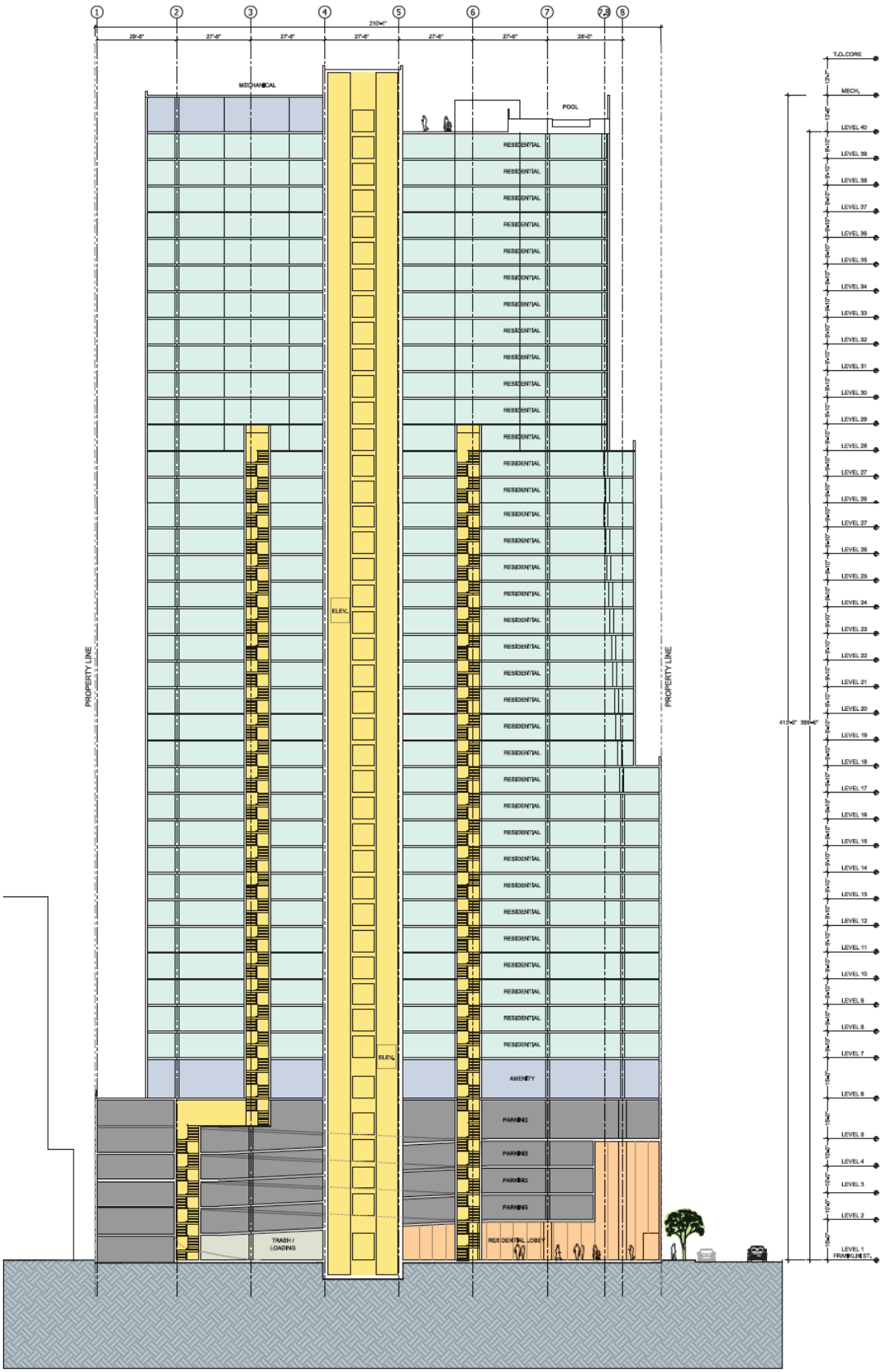
d. Landscaping and Streetscape

The project includes a total of 14,900 square feet of private open space in the form of private balconies. The project also includes a total of 27,692 square feet of group-usable open space in the form of a roof deck and an amenity space on level six that covers the entire podium. Landscaping plans for the ground floor, amenity floor, and rooftop are shown in Figures IV-21 through IV-23.

e. Utilities and Infrastructure Improvements

Utility services are currently provided to existing buildings at and surrounding the project site and would be readily available to serve the project. Water supply and treatment, and wastewater treatment are provided to Oakland by EBMUD. The project site is currently served by sanitary sewer and water lines. Minor connections or modifications to these existing lines would be required to serve a new structure on the project site. The project applicant, the project design, and occupants of the project site would be required to comply with the waste reduction and

[18] California Government Code, Section 65915 and Oakland Planning Code, Section 17.107.



Source: LARGE Architecture, 2022.

Figure IV-18
Project Site Section

South Elevation

East Elevation

Source: LARGE Architecture, 2022.

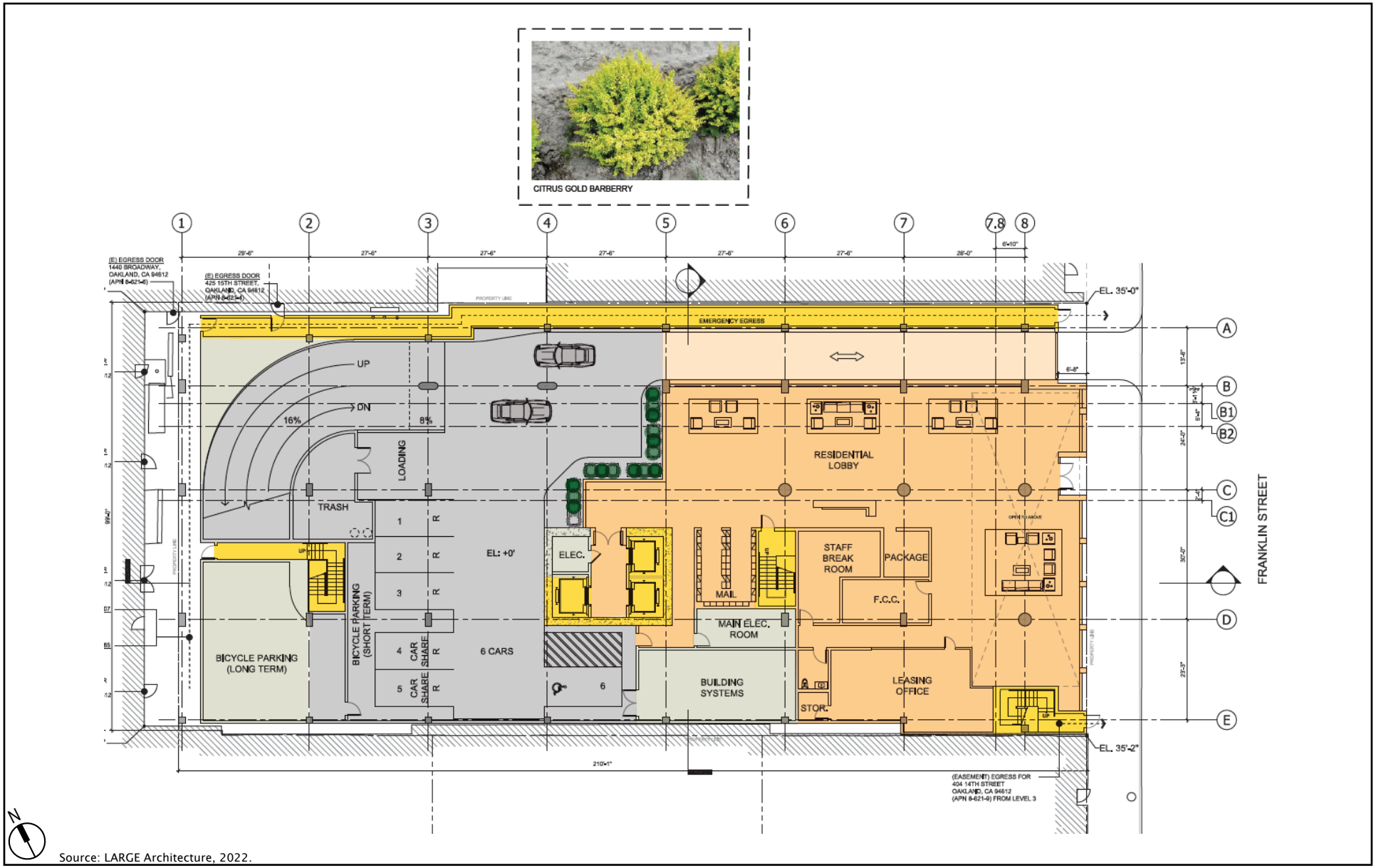
Figure IV-19
Site Elevation - South and East Elevation

North Elevation

West Elevation

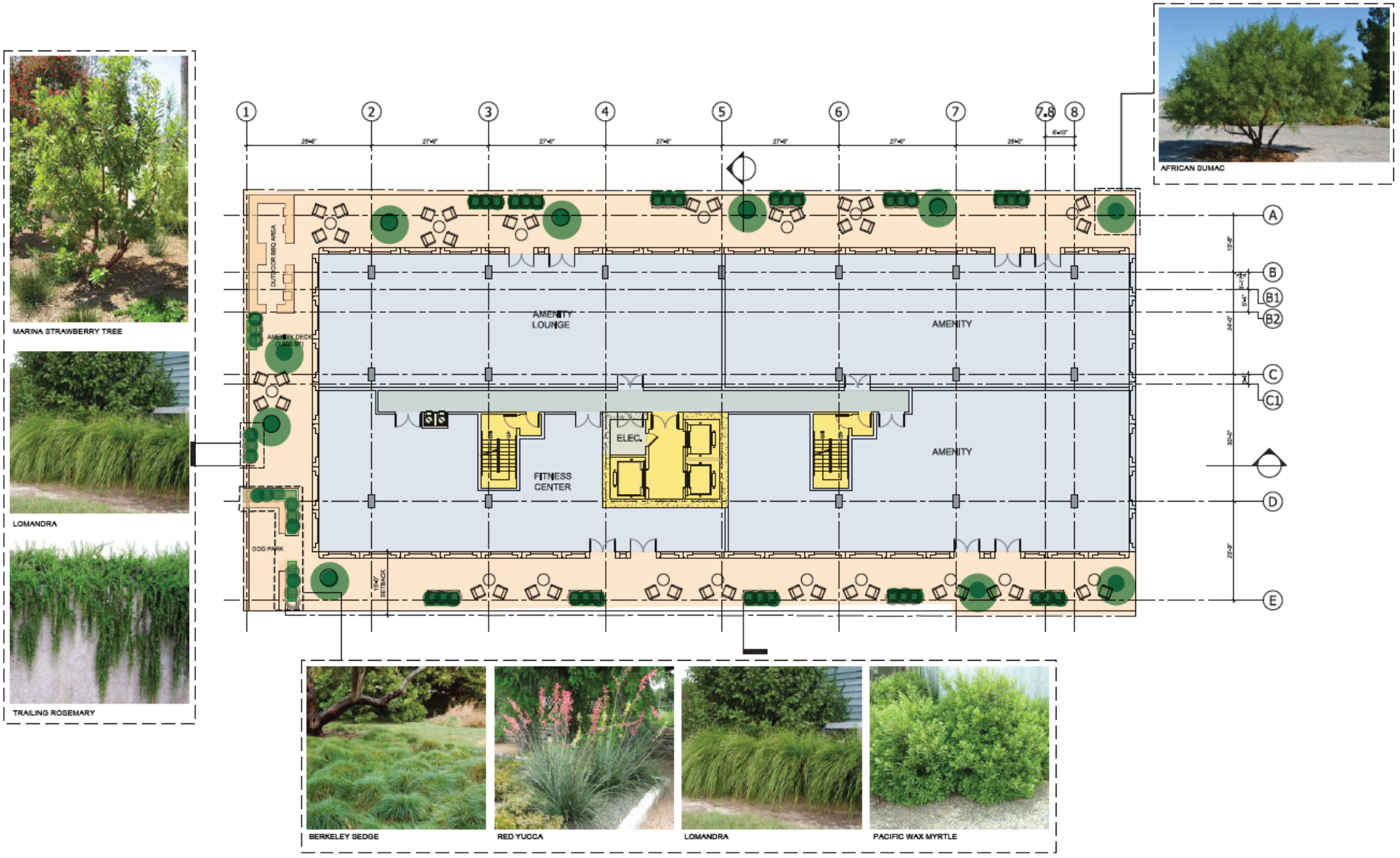
Source: LARGE Architecture, 2022.

Figure IV-20
Site Elevation - North and West Elevation



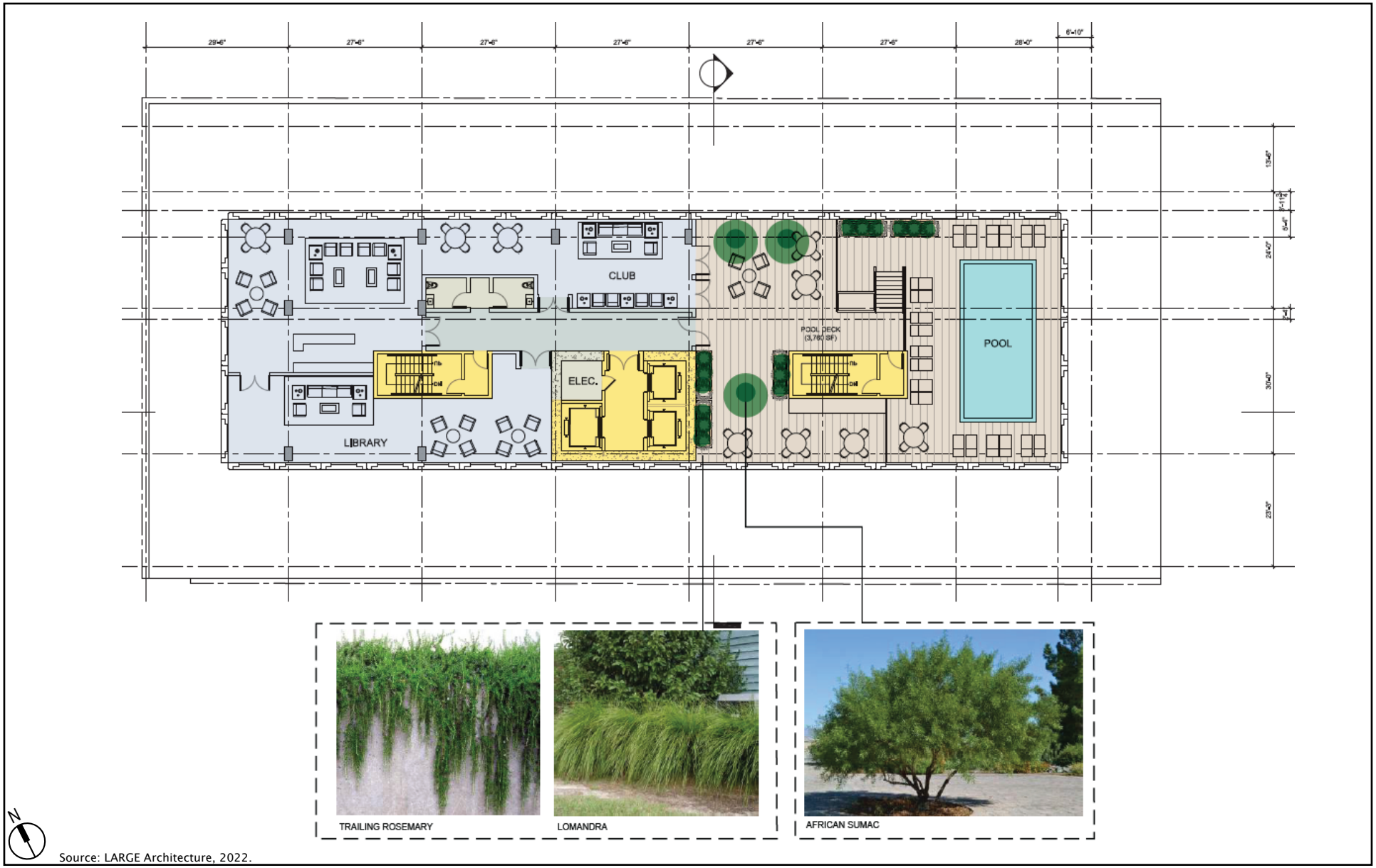
Source: LARGE Architecture, 2022.

Figure IV-21
Landscape Plan - Ground Floor



Source: LARGE Architecture, 2022.

Figure IV-22
Landscape Plan - Amenity Level (Level 6)



Source: LARGE Architecture, 2022.

Figure IV-23
Landscape Plan - Roof Deck

recycling regulations outlined in Oakland Municipal Code Chapter 15.34. Impacts related to utilities is described in *Section V.O, Utilities and Service Systems*.

f. Demolition and Site Preparation

All existing structures and site improvements are planned to be demolished/removed.

Excavation would extend to maximum of approximately 9 feet below the existing ground surface and require removal of approximately 6,700 cubic yards of soil off-site.

g. Construction Operations and Schedule

It is expected that project construction would begin in 2023 and last approximately 36 months, ending in 2026 when building occupation is anticipated. Construction equipment would include excavators, graders, rubber-tired dozers, tractors, loaders, backhoes, cranes, forklifts, drill rigs, rollers, air compressors, and pumps.

B. DISCRETIONARY ACTIONS

It is anticipated that this CEQA document will provide environmental review of all discretionary approvals and actions required for the project. A number of permits and approvals from other responsible agencies would be required before project development could be initiated. As lead agency for the project, the City of Oakland would be responsible for the majority of these reviews. The City would require a series of discretionary actions associated with approval of the project, which are described below. Other agencies would have some authority related to the project and its approvals.

1. City of Oakland

Key discretionary actions required by the City of Oakland are outlined below.

a. Planning Commission

Environmental Review and CEQA determination, Regular Design Review, and Conditional Use Permit for large projects.

b. Building Services Division

Demolition, Grading and Building permits including other related on- and off-site work permits. Permits would also include approval of Post-Construction Stormwater Control Plan

demonstrating compliance with Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP).

c. Oakland Department of Transportation (DOT)

Major and Minor Encroachment permits for all street improvements, and tie-backs[19] in the public right-of-way.

2. Actions by Other Agencies

Responsible agencies that have discretionary approval power over the project, including such actions as issuance of a permit or authorization may include, but are not limited to the following.

a. Bay Area Air Quality Management District (BAAQMD)

Issuance of permits for installation and operation of the emergency generator. Acceptance of notice of asbestos abatement and demolition activities, if any.

b. East Bay Municipal Utility District (EBMUD)

Grant a Special Discharge Permit to discharge construction dewatering to the sanitary sewer and/or approval of new service requests and new water meter installations.

c. Federal Aviation Administration (FAA)

Prior to construction, applicant will submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, providing notification of the construction of a structure over 200 feet in height. FAA will issue a notice determining whether the proposed construction is an obstruction.

[19] Tie-backs are a structural element installed in soil or rock to transfer load into the ground.

V. CEQA CHECKLIST

OVERVIEW

This CEQA Checklist summarizes the potential environmental impacts that could result from approval and implementation of the project. The analysis in this CEQA Checklist also summarizes the impacts and findings of Program EIRs that covered, specifically or as part of the cumulative analyses; the environmental effects of the project and that are still applicable to the project. As previously indicated, the Program EIRs include the 1998 LUTE EIR, 2011 Renewal Plan EIR, and 2010 Housing Element Update EIR. Given the timespan between the preparations of these EIRs, there are variations in the specific environmental topics addressed and significance criteria; however, as discussed above in *Chapter III, Purpose and Summary of this Document*, and throughout this Checklist, the overall environmental effects identified in each are largely the same and any significant differences are noted.

This CEQA Checklist hereby incorporates by reference the discussion and analysis in the Program EIRs for all potential environmental impact topics; however, only those environmental topics that could have a potential project-level environmental impact are included in this document. The EIR significance criteria have been consolidated and abbreviated in this CEQA Checklist for administrative purposes; where appropriate, the significance criteria have been updated to reflect current City of Oakland significance criteria established after the Program EIRs were prepared and that now apply to the project.

This CEQA Checklist provides a determination of whether the project would result in:

- Equal or Less Severity of Impact Previously Identified in Program EIRs
- Substantial Increase in Severity of Previously Identified Significant Impact in Program EIRs
- New Significant Impact

Where the severity of the impacts of the project would be the same as or less than the severity of the impacts described in the Program EIRs, the checkbox for Equal or Less Severity of Impact Previously Identified in Program EIRs is checked. The checkboxes for Substantial Increase in Severity of Previously Identified Significant Impact in Program EIRs or New Significant Impact are checked if there are significant impacts that are one or more of the following:

- Peculiar to project or project site (per CEQA Guidelines Sections 15183 or 15183.3).
- Not identified in the previous EIR (Program EIRs) (per CEQA Guidelines Sections 15183 or 15183.3), including off-site and cumulative impacts (per CEQA Guidelines Section 15183).
- Due to substantial changes in the project (per CEQA Guidelines Section 15162 and 15168).

- Due to substantial changes in circumstances under which the project will be undertaken (per CEQA Guidelines Section 15162).
- Due to substantial new information not known at the time the Program EIRs were certified (per CEQA Guidelines Sections 15162, 15183, or 15183.3).

The project will be subject to the City of Oakland applicable SCAs. Most of the SCAs that are identified for the project were identified in the 2011 Renewal Plan Amendment EIR; the 1998 LUTE EIR was developed prior to the City's application of SCAs. Since certification of the Previous EIRs, the City of Oakland has revised its SCAs, and the most current SCAs are identified in this CEQA Checklist. The project is also required to comply with all applicable mitigation measures identified in the Program EIRs.[20] The project sponsor has agreed to incorporate and/or implement the required mitigation measures and/or SCAs as part of the project. This CEQA Checklist includes references to the applicable SCAs, a list of the SCAs is included in Attachment A, and this list is incorporated by reference into the CEQA Checklist. If the CEQA Checklist (including Attachment A) inaccurately identifies or fails to list an SCA, the applicability of that SCA to the project is not affected. If the language describing a mitigation measure or an SCA included in the CEQA Checklist (including Attachment A) is inaccurately transcribed, the language set forth in the Program EIRs or City of Oakland SCAs shall control.

ATTACHMENTS

The following attachments are included at the end of this CEQA Checklist:

A. Mitigation Measures and Standard Conditions of Approval and Reporting Program
B. Project Consistency with Community Plan or Zoning, per CEQA Guidelines Section 15183
C. Infill Performance Standards, per CEQA Guidelines Section 15183.3
D. Urban Infill Exemption Analysis, per CEQA Guidelines Section 15332
E. Shadow Study
F. Wind Study
G. Air Quality and Greenhouse Gas Emissions Estimates and Health Risk Analysis
H. Summary of Cultural Resources within a 0.25-Mile Radius
I. Traffic Noise Outputs
J. Transportation Demand Management Memo

[20] These are development standards that are incorporated into projects as SCAs, regardless of a project's environmental determination, pursuant, in part, to CEQA Guidelines Section 15183. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, substantially mitigate environmental effects. In reviewing project applications, the City determines which of the SCAs are applied, based on the zoning district, community plan, and the type(s) of permit(s)/approvals(s) required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCA applies to each project.

A. AESTHETICS, SHADOW, AND WIND

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Have a substantial adverse effect on a public scenic vista; substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway; substantially degrade the existing visual character or quality of the site and its surroundings; or create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;	☒	☐	☐
b. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Sections 25980 through 25986); or cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;	☒	☐	☐
c. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, cast shadow on an historical resource, as defined by CEQA Guidelines Section 15064.5(a), such that the shadow would materially impair the resource's historic significance;	☒	☐	☐
d. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or	☒	☐	☐
e. Create winds that exceed 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.	☒	☐	☐

Since certification of the Program EIRs, the CEQA statutes have been amended related to assessment of aesthetics impacts. CEQA Guidelines Section 21099(d) states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the

environment."[21] Accordingly, aesthetics is no longer considered in determining if a project has the potential to result in significant environmental effects for projects that meet all three of the following criteria:

a. The project is in a transit priority area.[22]
b. The project is on an infill site.[23]
c. The project is residential, mixed-use residential, or an employment center.

The project meets all three criteria: (1) it is located in a transit priority area (less than 0.1 miles from the 12th Street BART Station); (2) the project site is an infill site within the urban area of the city of Oakland and is currently developed with a surface parking lot; and (3) the project is a residential project. Thus, this CEQA document does not consider scenic resources, visual character, and the adequacy of parking in determining the significance of project impacts under CEQA. Nonetheless, the City of Oakland recognizes that the public and decision makers may be interested in information pertaining to the aesthetic effects of a project and may desire that such information be provided as part of the environmental review process.

Because the project meets these criteria as described above, the information below related to aesthetics is provided solely for informational purposes and is not used to determine the significance of the environmental impacts, pursuant to CEQA.

1. Program EIR Findings

Scenic vistas, scenic resources, visual character, light and glare, shadow, and wind were analyzed in the Program EIRs, which found that the effects to these topics, except for wind, would be less than significant. The 1998 LUTE EIR identified potentially significant and unavoidable impacts related to wind hazards. The 2011 Renewal Plan EIR and the 2010 Housing Element Update EIR, which analyzed aesthetics, wind, and shadow, found all remaining impacts to these topics to be less than significant with applicable SCAs.

The 1998 LUTE EIR identified impacts related to scenic resources as less than significant. The LUTE EIR identified potentially significant impacts to visual character by new development that could block views, cast shadows, appears visually incongruous with adjacent low-rise development. Mitigation measures that recommended several zoning development standards were identified to reduce certain potential aesthetic effects to less-than-significant levels. Mitigation Measure N.1 of the 1998 LUTE EIR requires site specific studies and incorporation of specific design elements to reduce impacts related to wind hazards. The significant and unavoidable findings related to wind, recognize that in some instances wind impacts may not be

[21] CEQA Guidelines Section 21099(d)(1), op. cit.
[22] CEQA Guidelines Section 21099(a)(7), op. cit.
[23] CEQA Guidelines Section 21099(a)(4), op. cit.

reduced to a less-than-significant level, even with implementation of feasible wind reducing design elements.

2. Project Analysis

Scenic Vistas, Scenic Resources, Visual Character, and Light and Glare (Criterion 1.a)

The project involves construction of a 399.5-foot (413 feet at top of mechanical), 40-story office tower on a site that is generally flat and contains limited views of Downtown Oakland and the Oakland Hills. Under current conditions (2022), the site is occupied by a surface parking lot containing approximately 81 parking spaces and an associated guard shack. The surrounding area is an eclectic urban environment with a combination of building types and architectural styles and a mix of old and new landscaping. Surrounding building heights significantly vary with single-story commercial structures, to mid-rise buildings, and high-rises up to 40 stories concentrated near the project site.

Scenic Vistas and Resources

The Open Space, Conservation, and Recreation (OSCAR) element of the City of Oakland General Plan identifies views of downtown and Lake Merritt, the Oakland Hills, and panoramic views from Skyline Boulevard and Grizzly Peak Road as scenic resources that need to be protected. Given the urban nature of the project's area and existing development on the project site, views through and from the project site are primarily limited to the immediate developments adjacent to the site due to the flat topography and varied heights of buildings in the area. Therefore, like the findings of the Program EIRs, the project would not significantly affect any scenic vistas or scenic resources.

State Scenic Highway

The project site is approximately 1.25 miles south of the State Scenic Highways segment of I-580 that terminates at State Route (SR) 24. Because the I-580/SR-24 interchange is elevated and the project would be one of the tallest developments in Downtown Oakland, it would be visible to motorists on the designated scenic highway. However, the project is not expected to damage view of scenic resources for motorists on I-580/SR-24 because its size and scale would not substantially interfere with the view from the I-580/SR 24 interchange. Therefore, the project would not impact State Scenic Highways and associated resources under CEQA.

Visual Character

The project site is in Downtown Oakland which features an eclectic mix of development. As described in the LUTE EIR, "visual quality in Downtown Oakland varies from block to block. There are many fine buildings and visual landmarks, but there are also many buildings that are vacant and boarded up. Some blocks appear vibrant and attractive, others appear depressed and deteriorating." This remains an accurate description of downtown. The site is immediately surrounded by several 1- to 4-story older commercial structures to the north and south, a 10-story building to the west, an 18-story building to the southwest, and another surface parking lot across the street to the east. Within a block of the project site there are several commercial and/or residential mid to high-rise buildings ranging in height from 10 to 40 stories.

The project's new 40-story residential tower in place of a surface parking lot would contribute to the eclectic visual character of downtown falling in the mid to higher range of building heights within a block of the site. To ensure that the project would be consistent with the historic nature of the surrounding area and adjacent buildings, the project's design was reviewed by the City of Oakland's Landmarks Preservation Advisory Board (LPAB) on September 12, 2022.[24] In response to LPAB feedback, the applicant revised the design of the project to address LPAB, City staff, and the public's comments and concerns related to design. At the September 12, 2022, meeting, the LPAB reviewed the latest design and recommended approval to the Planning Commission. In addition, at the September 28, 2022, meeting, the Design Review Committee of the Planning Commission reviewed the project for its aesthetic qualities and recommended the project be presented to the Planning Commission. The project's design and height would also be consistent with the intended visual character of the Downtown Showcase District as described in the LUTE with a visually interesting building that harmonizes with the surrounding Downtown and contributes to an attractive skyline.

Furthermore, the project would be consistent with the zoning for the site that does not have a maximum height limit and with the intensity of development evaluated in the LUTE EIR. Such changes were anticipated under the LUTE EIR which found that high rise development could potentially block views, cast shadows, appear visually incongruous with adjacent low-rise development. The recommended mitigation measures required the City to prepare and adopt development standards that support the preferred skyline design. The City has since adopted such standards as part of its zoning updates.

As discussed above, the project has been found by the LPAB and Design Review Committee to be consistent with the area's visual character and furthermore, complies with the City's

[24] The office tower variation of the proposal was additionally reviewed by the LPAB on January 10, 2022, May 2, 2022, and September 12, 2022.

development standards and zoning. As a result, the project's impacts related to visual character would not be significant.

Light and Glare

Development facilitated by the project would result in additional lighting. While new sources of light would be installed as part of new buildings and site improvements, these new lighting sources would be consistent with typical light and glare conditions with other high-rise developments in the area and other non-residential uses and would not create new sources of substantial light and glare that would substantially and adversely affect nighttime views in the area. In addition, implementation of SCA-AES-1: Lighting (#19), which would require exterior lighting fixtures to be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties, would further reduce impacts on visual quality and character associated with lighting and glare.

Shadow (Criteria 1.b through 1.d)

Overview

As described in the 2011 Renewal Plan EIR, the anticipated development in the Renewal Plan Area would not have significant impacts to shade and shadow, and thus, no mitigation measures or SCAs were required. The 1998 LUTE EIR found that high rise development could potentially cast shadows and the recommended mitigation measures required the City to prepare and adopt development standards that support the preferred skyline design. The City has since adopted such standards as part of its zoning updates. The Program EIRs assumed the development of high-rise buildings throughout downtown consistent with the proposed project. An overview of the project's compliance with relevant standards is provided below in *Section V.J, Land Use, Plans, and Policies*, the project complies with the City's development standards and zoning. As such, the project, which is 40-stories, is within the scope of what was analyzed in the LUTE EIR. Additionally, the circumstances related to shade and shadow, particularly park and open space, that could be impacted by the project's shadow have not substantially changed since the Program EIRs were certified.

Shadow Study

An updated and site-specific shadow study was completed based on the City of Oakland's significant threshold criteria for information purposes understanding that such impacts are not considered significant under CEQA. The shadow study is provided in Attachment E: Shadow Study and is summarized below.

Under the City of Oakland thresholds of significance, a project would have a significant shadow impact if it were to:

- Introduce landscape that would cast substantial shadows on existing solar collectors;
- Cast a shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
- Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or
- Cast a shadow on an historic resource such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its designation as an historic resource.

The shadow analysis (see Attachment E) prepared for the project shows shadows that would be cast by the project at 9:00 a.m., 12:00 p.m., and 3:00 p.m., during the following times:

- Summer Solstice (June 21): Exhibits A1-P, A2-P, and A3-P
- Spring/Fall Equinoxes (March 20 and September 22): Exhibits B1-P, B2-P, and B3-P
- Winter Solstice (December 21): Exhibits C1-P, C2-P, and C3-P

Additionally, graphics showing the extents of the net new shading that would be generated by future projects together with the project near the project sire are also presented in Attachment E (see Exhibits A1-C, A2-C, and A3-C for cumulative conditions on the Summer Solstice; Exhibits B1-C, B2-C, and B3-C for cumulative conditions on the spring/fall equinoxes; and Exhibits C1-C, C2-C, and C3-C for cumulative conditions on the winter solstice).

The shadow study shows that between the hours of 9:00 a.m. and 3:00 p.m., the project would generally cast new shadow in the westward direction across Clay Street between 14th and 16th streets, northward up Broadway/Telegraph Avenues near 17th and 19th streets, and northeast along Franklin Street between 17th and 19th streets.

Landscape

The project would not introduce any new shadow from landscape features that would affect any existing solar collectors or historic resources.

Solar Collectors

As identified in the shadow analysis, no buildings with solar would be affected by the project's net new shadow. Therefore, the project would have no impact on solar collectors.

Parks and Open Spaces

There are several parks and open spaces in vicinity of the project site, however only two (Frank Ogawa Plaza and Latham Square) would be affected by the project's associated shadow and both existed when the LUTE EIR was prepared:

- **Frank Ogawa Plaza:** The publicly accessible park (see number 1 on all Exhibits of Attachment E) would receive net new shading throughout the year. This shading would generally last from approximately 9:00 a.m. to noon. During the affected period, only small portions of the plaza would be affected (typically about 1 to 2 percent of the plaza area at any given time) with most net new shading occurring in August (affecting approximately 7 percent of the plaza area). Project shadow during this time would affect grass areas, public walkways, and the semi-circular amphitheater space adjacent to city hall. However, the vast majority of the park would already be cast in shade during these times and the project's new shadow would only result in an incremental increase over existing conditions. Furthermore, while the project would cast new shade upon on the park at certain times, the project's shadow would only affect the park during the morning hours and over the course of the year only represent a very small increase over the levels of existing shadow. For these reasons, the increase in shading at the park as a result of the project would not substantially impair the beneficial use of the park.
- **Latham Square:** The publicly accessible open space (see number 2 on all Exhibits of Attachment E) would receive net new shading between early October through mid-March. This shading would generally begin at approximately 10:15 a.m. and be present up to 12:25 p.m. During the early fall and late spring around noon, only small portions near the southern tip of the square would be affected for a short duration around noon. On dates closer to the winter solstice (December 21), increasing amount of the square would be affected and for longer durations, starting around 10 a.m. and moving off the square to the east around 12:40 p.m. Portions of the plaza most affected would be the southern portions, comprised of the public walkways and small planting areas. Areas towards the north of the square where fixed benches and a fountain are located would only be affected on dates near the winter solstice. While net new shadow would be created throughout half of the year, the northern portions where net new shadow would be most prevalent (where fixed benches and the fountain are located) would only be affected for less than 2 months annually for a few hours each day. For these reasons, the increase in shading at the park as a result of the project would not substantially impair the beneficial use of the park.

Because the project's shadow would only affect nearby parks and open spaces for limited time durations, the presence of new shading cast by the project would not substantially impair the beneficial use of nearby parks or open spaces and would not be a significant impact.

Historic Resources

There are many historic resources in vicinity of the project site including designated landmarks, and other buildings noted by the City as having a cultural significance, including:

- 575 15th Street
- 1529 Clay Street
- 1605-1625 Clay Street
- 1 Frank H. Ogawa Plaza
- 532 16th Street
- 350 Frank Ogawa Plaza
- 510-516 16th Street
- 1611-1627 Telegraph Street
- 300 Frank Ogawa Plaza
- 150 Frank Ogawa Plaza
- 457 17th Street
- 1636 Telegraph Avenue
- 1628 Telegraph Avenue
- 1615-1617 Broadway
- 1500 Broadway
- 420 15th Street
- 449 15th Street
- 1440 Broadway
- 420-436 14th Street
- 1411 Franklin Street
- 401-421 15th Street
- 1441 Franklin Street
- 1428 Franklin Street
- 389 15th Street
- 1624 Franklin Street
- 394 17th Street
- 1709 Webster Street
- 1736-1814 Franklin Street

However, only two of these known historic resources (300 Frank Ogawa Plaza [Oakland Rotunda] and 1 Frank H. Ogawa Plaza [Oakland City Hall]) would be affected by shadow from the project. In addition, the site would affect three known historic APIs[25] (Downtown Historic API, 17th Street Commercial API, and Leamington Hotel Group API) in the area that would be affected by the project's associated shadow.

- **Oakland Rotunda:** The building (see number 6 on all Exhibits of Attachment E) would receive new shading between early November through mid-February. This shading would generally begin at approximately 9:00 a.m. and be present for up to approximately 105 minutes, moving west to east until leaving the rotunda no later than 10:45 a.m. The main historic-defining character of the building, in relation to shadow, belongs to the glass rotunda feature. Shadow size and duration would be the greatest on dates close to the winter solstice (December 21), with lesser shading size and durations being present on dates further removed. Although new shading as a result of the project would be cast on the rotunda, this would only diminish direct lighting into the building during the morning hours for approximately 4 months a year. In addition, natural lighting would still come through the glass windows located on north side year-round and would not affect their historic and visual character. Lastly, no new net shadow would be cast on the building during most of the year. Therefore, new project shading would not affect the historic-defining character element of this resource.
- **Oakland City Hall:** The building (see number 4 on all Exhibits of Attachment E) would receive new shading during the morning hours, from early September through early November and again from mid-February through early April. During the affected period, shadows would be

[25] An API (Area of Primary Importance) is a geographic area or cluster of buildings which have been idenitified by the City to have historic and cultural significance and are considered historic resources in of themselves.

cast on the eastern facades (both at the base and the lower quarter of the tower portion) as well as the lower rooftop starting at 9:00 a.m. and would be present for up to approximately 55 minutes while moving from across the building towards the north. Shadow size and duration would be the greatest on dates near the fall and spring equinoxes (9/21 and 3/21), with lesser shadow size and duration being present on dates further removed. Although new shading as a result of the project would cast new shadow on the primary façade of City Hall, this would only diminish direct lighting into the building during the morning. In addition, this building doesn't contain elements such as stained glass that would have their historic status affected by shadow. Thus, intermittent shadows would not affect the historical features or the character of Oakland City Hall.

- **Downtown Historic API, 17th Street Commercial API, and Leamington Hotel Group API:** Shadows generated by the project would shade several of the other buildings listed as historically significant within these APIs; however, none of these historic buildings (other than the Oakland Rotunda building described above) contain elements such as stained glass that would have their historic status affected by shadow. Thus, intermittent shadows would not change affect the historical features or the character of these districts.

For these reasons, the presence of new shading cast by the project would not substantially affect historical resources and would not be a significant impact.

Cumulative Effects

The cumulative conditions in the shadow study assess the project's potential impacts, in addition to other projects in the vicinity that could cast shadow on receptor sites (see Attachment E: Exhibits A1-C, A2-C, and A3-C for cumulative conditions on the Summer Solstice; Exhibits B1-C, B2-C, and B3-C for cumulative conditions on the spring/fall equinoxes; and Exhibits C1-C, C2-C, and C3-C for cumulative conditions on the winter solstice). The cumulative projects considered in this cumulative analysis include:

- 1431 Jefferson Street
- 1601 San Pablo Avenue
- 1750 Broadway
- 1433 Webster Street
- 1510 Webster Street

While many of these cumulative projects would generate new shadow at various times of day and year, most of the shadow cast by cumulative projects would not overlap/combine with shadow cast by the project to create any increase shadow coverage further affecting any of the resources described above.

Shadow Summary

The project would not introduce net new shadow that would significantly affect existing solar collectors or historic resources. The project would cast shadows on parks and open spaces; however, the duration of shadow would be limited for a few months out of year and for short periods of time. Lastly, while the project would cast shadows on historic resources, new shade would not materially affect their historical significance. As such, the project would not have any significant impacts relating to shade and shadow.

Wind (Criterion 1.e)

The 1998 LUTE EIR found that development in the Downtown Showcase District (in which the project site is located) could result in significant and unavoidable impacts to wind. The following mitigation was included to minimize wind impacts:

> **LUTE EIR Mitigation Measure N.1:** The City shall require the project sponsors to incorporate specific design elements in the final siting and designs for the high rises that could reduce ground-level winds within the Downtown Showcase District.

The LUTE EIR findings recognize that new development in this district may not be able to reduce wind impacts to below the City's thresholds. If a project would result in winds exceeding 36 miles per hour (mph) **for more than one (1) hour during daylight hours over a 1-year period**, the impact is considered significant. As part of the City's approval of the LUTE EIR, a statement of overriding consideration was adopted related to wind and new development in the Downtown Showcase District.

In response to Mitigation Measures N.1 and consistent with the City of Oakland CEQA Thresholds of Significance Guidelines (requires a wind analysis if the project site is located Downtown and the proposed height exceeds 100 feet), a wind study was prepared for the project to evaluate its wind effects and is included in Attachment F. The wind study assessed the project and potential mitigating design variations at 48 locations within a 1,600-foot radius of the project site, primarily along sidewalks and public rights-of-way for the following scenarios:

- Existing Conditions,
- Existing Conditions Plus Project, and
- Cumulative Conditions Plus Project.

The results of the wind analysis are described below. It should be noted that the wind analysis and results presented were prepared based on a previous design of the building massing; however, it was qualitatively determined by the preparers of the wind analysis that the proposed changes to the designs of the building (e.g., the building as presented in this document) are not significant enough to alter the wind conditions when compared to the original design. Thus, no

wind hazard conditions for the assessed configuration would remain the case with the proposed design. See Attachment F for the detailed analysis and Letter of Opinion from the wind study preparers.

Under **Existing Conditions** average wind speeds were 24 mph. Under **Existing Conditions Plus Project,** average wind speeds were reduced to 23 mph (1 mph below existing conditions). Furthermore, at no time during the year does wind speed exceed the City's hazard wind threshold.

Under **Cumulative Conditions Plus Project,** the wind study considered cumulative development project conditions within an approximately 1,500-foot radius of the project site. Proposed and approved projects assumed in the cumulative wind study include:

- 1100 Clay Street – Phase 2
- 1750 Broadway
- 415 20th Street
- 1510 Webster Street
- 1433 Webster Street
- Monarch Tower
- 285 12th Street

Under **Cumulative Conditions Plus Project,** the wind speed does not exceed the City's hazard wind threshold and averaged approximately 23 mph (1 mph below existing conditions).

Consistent with the findings of Impact N.1 of the 1998 LUTE EIR the project's wind impacts would be less than significant.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to aesthetics, shadow, or wind. The project would be required to implement SCA-AES-1: Lighting (#19) and Mitigation Measure N.1 of the 1998 LUTE EIR. In addition, implementation of the following SCAs would further reduce impacts of the project to aesthetics, shadow, and wind, including: SCA-AES-2: Landscape Plan (#18), SCA-AES-3: Trash and Blight Removal (#16), SCA-AES-4: Graffiti Control (#17), SCA-AES-5: Public Art for Private Development (#20), and SCA-UTIL-5: Underground Utilities (#82). Please see Attachment A for a full description of these mitigation measures and SCAs.

B. AIR QUALITY

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; during project operation result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$, or 82 pounds per day of PM_{10}; result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$, or 15 tons per year of PM_{10}; or	☒	☐	☐
b. For new sources of Toxic Air Contaminants (TACs), during either project construction or project operation expose sensitive receptors to substantial levels of TACs under project conditions resulting in (a) an increase in cancer risk level greater than 10-in-1-million, (b) a noncancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 microgram per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100-in-1 million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter; or expose new sensitive receptors to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100-in-1-million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 microgram per cubic meter.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR, which analyzed air quality, found most impacts to be less than significant with implementation of applicable SCAS; impacts related to exposure from toxic air contaminants (TACs) and odors were found to be significant and unavoidable, even with implementation of SCAs. The 1998 LUTE EIR identified mitigation measures to reduce the impact of criteria pollutant emissions from construction equipment and stationary sources to a less-than-significant level; however, the 1998 LUTE EIR found that increased criteria pollutant emissions from increased traffic, including reduced emissions after implementation of identified mitigation measures, would result in a significant and unavoidable impact. The 1998 LUTE EIR did not quantify or address cumulative health risks as such analysis was not required when that EIR was prepared. The 2010 Housing Element Update EIR identified significant impacts related to area

and mobile sources of air pollutants and diesel particulate matter. However, these impacts were determined less than significant with the implementation of applicable SCAs.

2. Project Analysis

The project is in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The California Air Resources Board (CARB) and United States Environmental Protection Agency (EPA) focus on the following air pollutants as regional indicators of ambient air quality:

- Carbon monoxide (CO).
- Ozone.
- Suspended particulate matter—both respirable (PM_{10}) and fine ($PM_{2.5}$).
- Nitrogen dioxide.
- Sulfur dioxide.
- Lead.

Because these are the most prevalent air pollutants known to be harmful to human health, based on extensive criteria documents, they are referred to as "criteria air pollutants." In the SFBAAB, the primary criteria air pollutants of concern are CO, ground-level ozone formed through reactions of oxides of nitrogen (NOx) and reactive organic gases (ROG), PM_{10}, and $PM_{2.5}$. The BAAQMD adopted thresholds of significance to assist lead agencies in the evaluation and mitigation of air quality impacts under CEQA.[26] The BAAQMD's thresholds – which were utilized by the City of Oakland in establishing its own thresholds of significance – established levels at which emissions of ROG, NO_x, suspended particulate matter, carbon monoxide, TACs, and odors could cause significant air quality impacts. Two fractions of particulate matter emissions are regulated based on aerodynamic resistance: those with diameters equal to or less than 10 microns (PM_{10}) and those with diameters equal to or less than 2.5 microns ($PM_{2.5}$). These thresholds were developed to represent a cumulatively considerable contribution to regional air quality, and therefore reflect not only project-level thresholds but also cumulative thresholds. The BAAQMD's thresholds of significance adopted by the City of Oakland that are used in this CEQA document are summarized in Table V.B-1 below.

Criteria Air Pollutants (Criterion 2.a)

The BAAQMD currently recommends using the most recent version of the California Emissions Estimator Model (CalEEMod version 2016.3.2) to estimate construction and operational emissions of criteria air pollutants and precursors for a project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The default data (e.g., type

[26] Bay Area Air Quality Management District (BAAQMD), 2017. CEQA Air Quality Guidelines, May.

TABLE V.B-1 CITY OF OAKLAND'S THRESHOLDS OF SIGNIFICANCE

Impact Analysis	Pollutant	Threshold of Significance
Regional Air Quality (Construction)	ROG	54 pounds/day (average daily emission)
	NO_x	54 pounds/day (average daily emission)
	Exhaust PM_{10}	82 pounds/day (average daily emission)
	Exhaust $PM_{2.5}$	54 pounds/day (average daily emission)
Regional Air Quality (Operation)	ROG	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	NO_x	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	Exhaust PM_{10}	82 pounds/day (average daily emission) 15 tons/year (maximum annual emission)
	Exhaust $PM_{2.5}$	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
Local Community Risks and Hazards (Operation and/or Construction)	Fugitive dust (PM_{10} and $PM_{2.5}$)	Best management practices (BMPs)
	Exhaust $PM_{2.5}$ (project)	0.3 $\mu g/m^3$ (annual average)
	TACs (project)	Cancer risk increase > 10 in one million Chronic hazard index > 1.0
	Exhaust $PM_{2.5}$ (cumulative)	0.8 $\mu g/m^3$ (annual average)
	TACs (cumulative)	Cancer risk > 100 in one million Chronic hazard index > 10.0

Note: $\mu g/m^3$ = micrograms per cubic meter
Source: BAAQMD, 2017. CEQA Air Quality Guidelines, May.

and power of construction equipment) is supported by substantial evidence provided by regulatory agencies and a combination of statewide and regional surveys of existing land uses.

The primary input data used to estimate the increase in emissions associated with construction and operation of the project are summarized in Table V.B-2. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is provided in Attachment G.

Criteria Air Pollutants from Construction

Construction activities generate criteria air pollutant emissions, which can adversely affect regional air quality if emissions exceed the BAAQMD's thresholds of significance. Project construction activities would include site preparation, grading, building construction, paving, and applications of architectural coatings. The primary pollutant emissions of concern during project construction would be ROG, NO_x, PM_{10}, and $PM_{2.5}$ from the exhaust of off-road construction equipment and on-road vehicles related to worker vehicles, vendor trucks, and haul trucks. In addition, fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be generated by soil disturbance and

demolition activities and fugitive ROG emissions would result from the application of architectural coatings and paving. Emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ during project construction were estimated using the CalEEMod input parameters summarized in Tables V.B-2 and V.B-3.

TABLE V.B-2 SUMMARY OF CALEEMOD LAND USE INPUT PARAMETERS FOR THE PROPOSED PROJECT

Land Use Type	CalEEMod Land Use Type	Units	Unit Amount
Residential	Apartments High Rise	Dwelling Unit	381
Parking Garage	Enclosed Parking with Elevator	Spaces	167

Note: The number of dwelling units and parking spaces reported in Table V.B-2 are based on the most recently updated CEQA scenarios, which include 31 more dwelling units (9% increase) and 27 less parking spaces compared to the land use parameters modeled in Attachment G. Emission results in Attachment G were conservatively scaled up by 10% to account for these differences.
Source: Attachment G.

TABLE V.B-3 SUMMARY OF CALEEMOD CONSTRUCTION INPUT PARAMETERS

CalEEMod Input Category	Construction Assumptions and Changes to Default Data
Construction Phase	CalEEMod applies default equipment usage and construction phase lengths based on the findings of a survey of construction projects less than 5 acres. The survey results are organized in CalEEMod based on lot acreage size. While the project is approximately 1 acre, the multi-story development projects included in the construction survey were approximately 3 acres. Therefore, the default equipment usage and construction phase lengths for a 3-acre lot were used to estimate the total hours of equipment operation (and associated emissions) required to construct the project.
Construction Equipment	A drill rig was added to the list because auger cast piles would be used.
Material Movement	Approximately 6,700 cubic yards of soil would be off-hauled.
Demolition	Demolition phase was removed from the default construction schedule because the project site is an existing parking lot and no major demolition would occur.

Notes: Demolition and material movement information provided by the project sponsor. Default CalEEMod data was used for all other parameters not described.
Source: See Attachment G.

Project construction would begin as early as July 2022 and last approximately 36 months. The total emissions estimated during construction were averaged over the total working days (924 days) and compared to the City's thresholds of significance. As shown in Table V.B-4, the project's estimated emissions for ROG, NO_x, and exhaust PM_{10} and $PM_{2.5}$ during construction are below the applicable thresholds. Furthermore, the City's SCA-AIR-1: Criteria Air Pollutant Controls – Construction Related (#21) is also applicable to the project and requires project construction to limit engine idling time, to tune and maintain construction equipment, to only use diesel engines when electric, propane, or natural gas alternatives are not feasible, and to use low

ROG coatings on structures. Therefore, emissions of criteria air pollutants from project construction would have a less-than-significant impact on regional air quality.

TABLE V.B-4 ESTIMATED CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Emissions Scenario	ROG	NOx	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Average Daily Construction Emissions	6.1	6.6	0.22	0.21
Thresholds of Significance	54	54	82	54
Exceed Threshold?	**No**	**No**	**No**	**No**

Note: The number of dwelling units and parking spaces reported in Table V.B-2 are based on the most recently updated CEQA scenarios, which include 31 more dwelling units (9% increase) and 27 less parking spaces compared to the land use parameters modeled in Attachment G. Emission results in Attachment G were conservatively scaled up by 10% to account for these differences.
Source: See Attachment G.

The generation of fugitive dust PM_{10} and $PM_{2.5}$ from soil disturbance and demolition activities could adversely affect local air quality. Neither BAAQMD nor the City has a quantitative threshold of significance for fugitive dust PM_{10} and $PM_{2.5}$ emissions; however, the BAAQMD considers implementation of best management practices (BMPs) to control dust during construction sufficient to reduce potential impacts to a less-than-significant level. Because construction of the project would require a demolition permit and exceed the screening criterion for general office buildings listed in the BAAQMD's CEQA Guidelines, construction of the project would be required to implement the City's enhanced control measures for construction emissions described under SCA-AIR-2: Dust Controls – Construction Related (#20), including but not limited to, watering exposed construction areas, application of ground cover or soil stabilizers to disturbed areas, and dust control monitoring. Implementation of the enhanced dust-control measures described under SCA-AIR-2 would satisfy the BAAQMD's requirement for BMPs during construction. Because implementation of dust-control measures under SCA-AIR-2 would satisfy the BAAQMD's threshold of significance, the impact on local air quality from dust generated during project construction would be less than significant.

Although the only existing structure that would be removed during project construction is the parking booth, the project is subject to all applicable laws and regulations regarding demolition of asbestos-containing materials enforced through the City's SCA-AIR-3: Asbestos in Structures (#26). In addition, because naturally occurring asbestos has not been mapped in the vicinity of the project, the dust mitigation measures for asbestos described under the City's SCA #27: Naturally-Occurring Asbestos would not apply to the project. With implementation of SCA-AIR-1: Criteria Air Pollutant Controls – Construction Related (#21), SCA-AIR-2: Dust Controls – Construction Related (#20), and SCA-AIR-3, construction of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to criteria pollutant emissions from construction that were not identified in the Program EIRs.

Criteria Air Pollutants from Operations

Operational activities generate criteria pollutant emissions, which can adversely affect regional air quality if emissions exceed the BAAQMD's thresholds of significance. The primary pollutant emissions of concern during the project's operation would be ROG, NO_x, and exhaust PM_{10} and $PM_{2.5}$ from mobile sources, energy use, area sources (e.g., consumer products and architectural coatings), and stationary sources. Project emissions were estimated for 2025, which is the earliest expected year of operation. Since statewide vehicle emission standards are required to improve over time in accordance with the Pavley (Assembly Bill 1493) and Low-Emission Vehicle regulations (Title 13, California Code of Regulations, and Section 1961.2), estimating emissions for the earliest year of operation provides the maximum expected annual emissions. Additional project-specific information used to calculate operation emissions in CalEEMod, including changes to default data, is summarized in Table V.B-5.

TABLE V.B-5 SUMMARY OF CALEEMOD OPERATION INPUT PARAMETERS FOR THE PROJECT

CalEEMod Input Category	Operation Assumptions and Changes to Default Data
Vehicle Trips	Daily trip rates for each type of land use were adjusted according to the project traffic analysis for the proposed project (see *Section V.N, Transportation and Circulation*). These trip estimates account for a 46.9% trip reduction based on the City of Oakland's Transportation Impact Review Guidelines for development in an urban environment within 0.5 miles of a BART station.
Fireplaces	According to the project sponsor, no fireplaces or woodstoves were proposed as a part of the project.
Stationary Sources	It was conservatively assumed that a 1,000-kilowatt diesel emergency generator would be included for project operation. The diesel generator would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance).

Note: Default CalEEMod data used for all other parameters not described.
Source: See Attachment G.

The estimated annual and average daily emissions during the operational phase of the project are compared to the City's thresholds of significance in Table V.B-6. The estimated emissions for ROG, NO_x, and exhaust PM_{10} and $PM_{2.5}$ were below the thresholds and, therefore, would have a less-than-significant impact on regional air quality. As a result, operation of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to criteria pollutant emissions during operation that were not identified in the Program EIRs.

TABLE V.B-6 ESTIMATED EMISSIONS FROM PROJECT OPERATION

	Maximum Annual Emissions (Tons)				Average Daily Emissions (Pounds)			
Emissions Scenario	**ROG**	**NOx**	**Exhaust PM_{10}**	**Exhaust $PM_{2.5}$**	**ROG**	**NOx**	**Exhaust PM_{10}**	**Exhaust $PM_{2.5}$**
Area	1.84	0.03	0.02	0.02	10.08	0.18	0.09	0.09
Energy	0.02	0.13	0.01	0.01	0.09	0.73	0.06	0.06
Mobile	0.24	1.59	0.01	0.01	1.33	8.73	0.05	0.05
Generator	0.06	0.27	0.01	0.01	0.33	1.48	0.05	0.05
Total Project Emissions	2.2	2.0	<0.1	<0.1	11.5	9.6	0.2	0.2
Thresholds of Significance	**10**	**10**	**15**	**10**	**54**	**54**	**82**	**54**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Note: The number of dwelling units and parking spaces reported in Table V.B-2 are based on the most recently updated CEQA scenarios, which include 31 more dwelling units (9% increase) and 27 less parking spaces compared to the land use parameters modeled in Attachment G. Emission results in Attachment G were conservatively scaled up by 10% to account for these differences.
Source: See Attachment G.

Toxic Air Contaminants (Criterion 2.b)

In addition to criteria air pollutants, local emissions of TACs, such as diesel particulate matter (DPM), are a concern for nearby receptors. TACs include a diverse group of air pollutants that can adversely affect human health. Unlike criteria air pollutants, which generally affect regional air quality, TAC emissions are evaluated based on estimations of localized concentrations and health risk assessments. The adverse health effects a person may experience following exposure to any chemical depend on several factors, including the amount (dose), duration, chemical form, and any simultaneous exposure to other chemicals.

For risk assessment purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per 1 million exposed individuals over a lifetime of exposure. Non-carcinogenic substances are generally assumed to have a safe threshold below which health impacts would not occur. Acute and chronic exposure to non-carcinogens is expressed as a hazard index (HI), which is the sum of expected exposure levels divided by the corresponding acceptable exposure levels. In the SFBAAB, adverse air quality impacts on public health from TACs are predominantly from DPM. In 1998, the CARB identified DPM from diesel-powered engines as a TAC based on its potential to cause cancer and other adverse health effects.[27]

[27] California Air Resources Board (CARB), 1998. Initial Statement of Reasons for Rulemaking; Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, June.

DPM and $PM_{2.5}$ emissions would be generated from both project construction and operation. Project construction would generate DPM and $PM_{2.5}$ emissions from the exhaust of off-road diesel construction equipment and on-road vehicles (worker, vendor, and haul trucks) accessing the project site. Project operations would generate DPM and $PM_{2.5}$ emissions from testing and maintenance of an emergency generator. DPM and $PM_{2.5}$ from diesel-powered engines are a complex mixture of soot, ash particulates, metallic abrasion particles, volatile organic compounds, and other components that can contribute to a range of health problems.

The emissions of DPM and $PM_{2.5}$ from diesel exhaust during construction and operation activities could pose a health risk to nearby sensitive receptors if the associated health risks exceed the BAAQMD's thresholds of significance. The term sensitive receptor refers to a location where individuals are more susceptible to poor air quality. Sensitive receptors include schools, convalescent homes, and hospitals because the very young, the old, and the infirm are more susceptible than the rest of the public to air-quality-related health problems. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants. The existing sensitive receptors in the project's vicinity include multi-family residences and schools. The BAAQMD recommends evaluating the potential health risks to sensitive receptors located within 1,000 feet of a project's property boundary that could be exposed to TACs, such as DPM and $PM_{2.5}$.

Because the project would construct more than 100 dwelling units in an area identified on the BAAQMD's Healthy Places Map,[28] the project is subject to SCA-AIR-4: Diesel Particulate Matter Controls – Construction Related (#22), which requires the preparation of a screening-level health risk assessment (HRA) to determine whether additional health risk reduction measures are needed. The following project-level HRA meets the requirements of SCA-AIR-4, *method i*.

Generation of TAC Emissions during Construction

The annual average concentrations of DPM and exhaust $PM_{2.5}$ concentrations during project construction were estimated within 1,000 feet of the project using the U.S. Environmental Protection Agency's Industrial Source Complex Short Term ($ISCST_3$) air dispersion model. For this analysis, emissions of exhaust PM_{10} were used as a surrogate for DPM, which is a conservative assumption because more than 90 percent of DPM is less than 1 micron in diameter. The input parameters and assumptions used for estimating emission rates of DPM and $PM_{2.5}$ from off-road diesel construction equipment and on-road vehicles (worker, vendor, and haul trucks) accessing the project site are included in Attachment G.

Daily emissions from construction were assumed to occur from 7:00 a.m. to 7:00 p.m. Monday through Friday and from 9:00 a.m. to 5:00 p.m. on Saturday. The exhaust from off-road

[28] Bay Area Air Quality Management District (BAAQMD), 2016. Planning Healthy Places, May.

equipment was represented in the ISCST3 model as a series of volume sources with a release height of 5 meters to represent the mid-range of the expected plume rise from frequently used construction equipment. Because less than 1 percent of total construction emissions of DPM and $PM_{2.5}$ would be generated by on-road vehicles accessing the project site, only the off-road diesel construction equipment was included in the analysis.

A uniform grid of receptors spaced 10 meters apart was placed around the project site as a means of developing isopleths (i.e., concentration contours) that illustrate the dispersion pattern from the various emissions sources. Receptor heights were set at 1.8 meters and 4.8 meters to represent ground-level receptors and second-floor receptors, respectively. The ISCST3 model input parameters included 3 years of BAAQMD meteorological data from the Oakland Sewage Treatment Plant weather station located about 2 miles northwest of the project site.

The air dispersion model was used to estimate annual average concentrations of DPM and $PM_{2.5}$ at the receptors near the project site. Based on the results of the air dispersion model (Attachment G), potential health risks were evaluated for the maximally exposed individual student (MEIS) on the ground floor of a public charter school (Envision Academy of Arts and Technology) serving grades 6-12 about 305 feet to the northeast of the project site, and the maximally exposed individual resident (MEIR) located on the second floor at a mixed-use commercial and apartment building adjacent to the project site to the south. Locations of the MEIR and the MEIS are shown in Figure V.B-1.

In accordance with guidance from the BAAQMD[29] and the Office of Environmental Health Hazard Assessment (OEHHA),[30] a health risk assessment was conducted to calculate the incremental increase in cancer risk and chronic HI to sensitive receptors from DPM emissions during construction. Analysis of acute non-cancer health hazards from construction activity is not recommended by BAAQMD, nor has a reference exposure level been approved by OEHHA and CARB. The annual average concentration of DPM at the MEIR and MEIS was used to conservatively assess potential health risks to nearby sensitive receptors. The input parameters and results of the health risk assessment are included in Attachment G.

It was conservatively assumed that the MEIR and MEIS would be exposed to an annual average DPM concentration over the entire estimated duration of construction, which is about 3 years (36 months). At the MEIR location, the incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a young child exposed to DPM for 3 years starting from infancy in the third trimester of pregnancy. At the MEIS location, the incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a middle school child exposed to DPM for 3 years starting at the age of 11. These exposure scenarios represent the

[29] Bay Area Air Quality Management District (BAAQMD), 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards, May.

[30] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February.

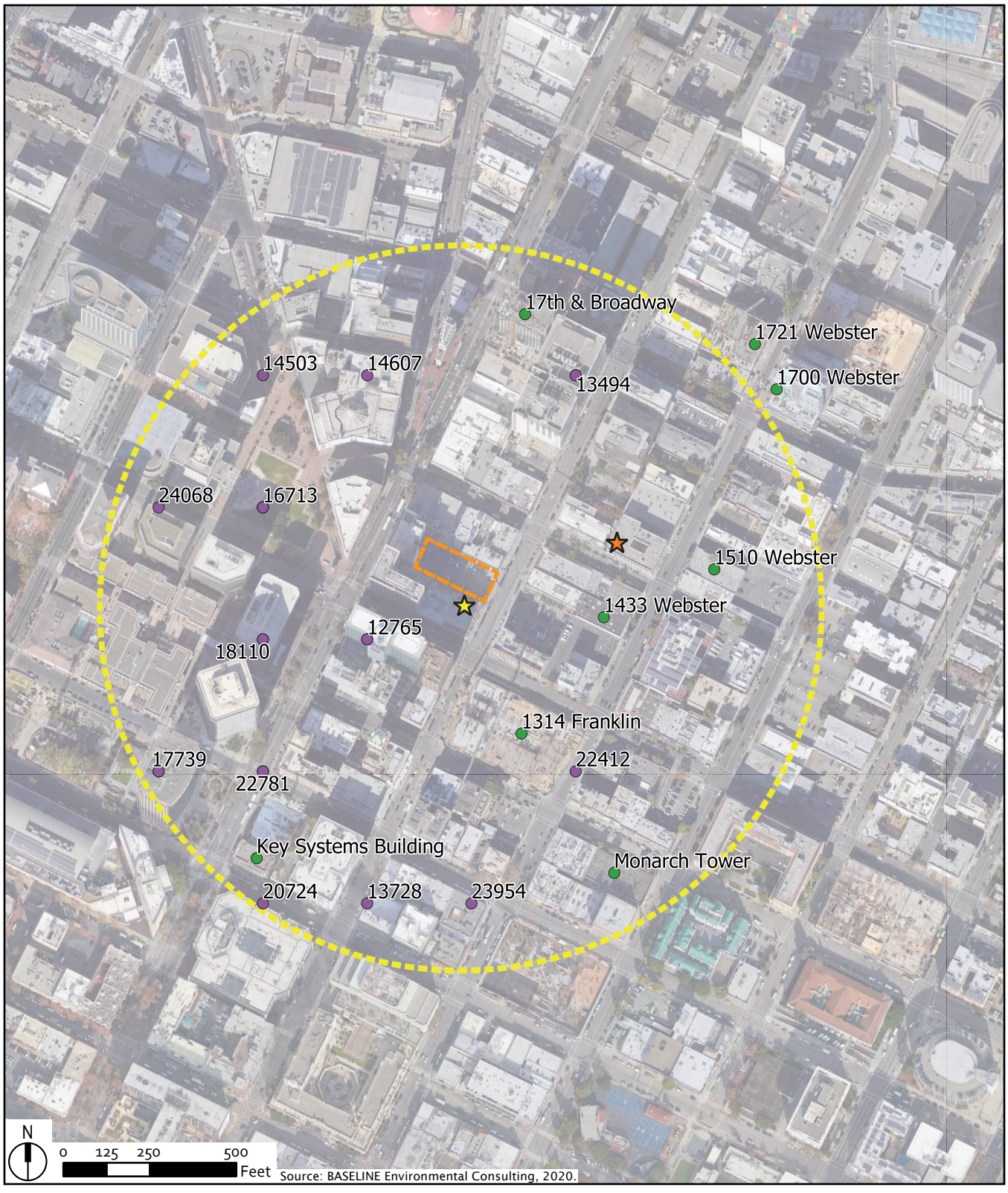


Figure V.B-1
MEIR and MEIS Locations

most sensitive individuals who could be exposed to adverse air quality conditions in the vicinity of the project site.

In accordance with SCA-AIR-4: Diesel Particulate Matter Controls – Construction Related (#22), *method i*, the project would be required to identify and implement health risk reduction measures if the screening health risk analysis shows that the health risks resulting from the project's uncontrolled construction emissions would exceed the City's thresholds. Estimates of the health risks at the MEIR and the MEIS from exposure to DPM and $PM_{2.5}$ concentrations during project construction are summarized and compared to the City's thresholds of significance in Table V.B-7. Under the construction scenario without any health risk reduction measures, the estimated chronic HIs for DPM and annual average PM2.5 concentration from construction emissions were below the City's thresholds for both the MEIR and the MEIS; the excess cancer risk at the MEIS was also below the threshold. However, the excess cancer risk at the MEIR would exceed the City's threshold. In accordance with SCA-AIR-4, the project will use the following health risk reduction measure: All construction equipment of 100 horsepower or more will be equipped with engines certified to meet the CARB's Tier 4 Final emissions standards; and all construction equipment with 25 to 100 horsepower will be equipped with engines certified to meet the CARB's Tier 2 emissions standards or higher and Level 3 diesel particulate filter (DPF). Currently, Tier 4 engines or installation of Level 3 verified diesel emission control strategies represent the best available control technology for control of DPM and are expected to reduce emissions by 85 percent.[31]

As shown in Table V.B-7, the engine requirement, detailed above, would reduce the excess cancer risk at the MEIR to below the City's threshold. The project applicant will prepare a Construction Emissions Minimization Plan (Emissions Plan) in accordance with SCA-AIR-4 to ensure that the engine requirement will be enforced during construction and will submit the Emissions Plan to the City for review and approval prior to issuance of building permits. With the implementation of SCA-AIR-4, construction of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

Generation of TAC Emissions during Operation

Compliance with the California Building Code, Section 2702.5, requires that backup emergency generator be used to ensure elevator safety in all building in excess of 75 feet in height. To operate an emergency generator, the project would be required to comply with the BAAQMD's permit requirements for a stationary source. In accordance with BAAQMD's Regulation 2-5, New Source Review of Toxic Air Contaminants, the BAAQMD does not issue permits for generators that would result in an excess cancer risk greater than 10 in 1 million or a chronic HI greater than 1.0. These health standards are also enforced through the City's SCA-AIR-5: Stationary Sources of

[31] http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm.

TABLE V.B-7 HEALTH RISKS FROM PROJECT CONSTRUCTION

		Diesel Particulate Matter		Exhaust $PM_{2.5}$
Emissions Scenario	**Sensitive Receptor**	**Cancer Risk (per million)**	**Chronic Hazard Index**	**Annual Average Concentration (µg/m³)**
Construction Without Health Risk Reduction Measure[a]	Maximally Exposed Individual Resident	**46.5**	0.03	0.14
	Maximally Exposed Individual Student	1.9	<0.01	0.02
Construction with Health Risk Reduction Measure[a]	Maximally Exposed Individual Resident	7.2	<0.01	0.02
	Maximally Exposed Individual Student	0.3	<0.01	<0.01
Thresholds of Significance		**10**	**1**	**0.3**

Notes: **Bold and shaded** value exceeds the corresponding threshold.
µg/m³ = micrograms per cubic meter
The number of dwelling units and parking spaces reported in Table V.B-2 are based on the most recently updated CEQA scenarios, which include 31 more dwelling units (9% increase) and 27 less parking spaces compared to the land use parameters modeled in Attachment G. Emission results in Attachment G were conservatively scaled up by 10% to account for these differences.
[a] Requiring that all construction equipment of 100 horsepower or more to be equipped with engines certified to meet the California Air Resources Board's (CARB's) Tier 4 Final emissions standards, and that all construction equipment less than 100 horsepower to be equipped with engines certified to meet the CARB's Tier 2 emissions standards or higher and Level 3 diesel particulate filter (DPF).
Source: See Attachment G.

Air Pollution (Toxic Air Contaminants) (#24), which requires a screening-level health risk assessment of any new stationary source of TACs to ensure the health risks are below acceptable levels. The following HRA meets the requirements of SCA-AIR-5.

This analysis conservatively assumed the project's emergency generators would result in the BAAQMD's maximum permissible excess cancer risk of 10 in 1 million due to emissions of DPM. However, the infrequent nature of annual testing maintenance of emergency diesel generators is not likely to result in the maximum health risks permitted by the BAAQMD. Based on this conservative assumption, the BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version 4.0)[32] was used to estimate the equivalent screening-level health risks values for chronic HI and annual average $PM_{2.5}$ concentrations. The calculator applies similar methods used to establish the emission threshold levels for TACs reported in the BAAQMD's Regulation 2-5 and includes the most recent health risk parameters recommended by OEHHA.[33] Based on the emission rate for DPM (0.0071 pounds per day) that would result in a cancer risk of 10 in 1 million, the associated fraction of $PM_{2.5}$ emissions from an emergency generator were estimated using

[32] Bay Area Air Quality Management District (BAAQMD), 2020a. Risk and Hazards Emissions Screening Calculator (Beta Version 4.0).

[33] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February.

the CARB's speciation profiles.[34] The health risk screening values from the project's emergency generators were then refined based on the distances from the generator to the MEIR and to the MEIS using the BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool incorporated in the BAAQMD Health Risk Calculator (Beta Version 4.0).[35] The supporting health risk calculations are included in Attachment G.

The conservative screening-level health risks to sensitive receptors associated with operation of the emergency generators are summarized and compared to the City's thresholds of significance in Table V.B-8. The estimated excess cancer risk and chronic HI for DPM and the annual average $PM_{2.5}$ concentration from operation of the emergency generators would not exceed the City's thresholds of significance; therefore, the project's emissions of DPM and $PM_{2.5}$ during operation of an emergency generators would have a less-than-significant impact on nearby sensitive receptors and no further actions are required to address health risks under the City's SCA-AIR-5: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24). As a result, operation of the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

TABLE V.B-8 HEALTH RISKS FROM OPERATION OF EMERGENCY GENERATORS AT THE PROJECT SITE

	Diesel Particulate Matter		Exhaust $PM_{2.5}$
Sensitive Receptor	**Cancer Risk (per million)**	**Chronic Hazard Index**	**Annual Average Concentration ($\mu g/m^3$)**
Maximally Exposed Individual Resident	10.0	<0.01	<0.01
Maximally Exposed Individual Student	2.5	<0.01	<0.01
Thresholds of Significance	**10**	**1.0**	**0.3**

Notes: $\mu g/m^3$ = micrograms per cubic meter
Bold and shaded value exceeds the corresponding threshold.
Source: BAAQMD, 2020. Risk and Hazards Emissions Screening Calculator (Beta Version).

Cumulative TAC Emissions

In addition to a project's individual TAC emissions during construction and operation, the potential cumulative health risks to sensitive receptors from existing and reasonably foreseeable future sources of TACs were evaluated. Based on the proximity to existing and future sources of TACs, cumulative health risks were estimated at the MEIR to represent the worst-case-exposure scenario for existing sensitive receptors in the project vicinity. The BAAQMD's online screening tools were used to provide conservative estimates of how much existing and foreseeable future

[34] California Air Resources Board (CARB), 2018. Speciation Profiles Used in ARB Modeling. PMPROF spreadsheet for particulate matter chemical profiles for source categories. Available at: https://www.arb.ca.gov/ei/speciate/speciate.htm#assnfrac, accessed January 29, 2018.

[35] Bay Area Air Quality Management District (BAAQMD), 2020a, op. cit.

TAC sources would contribute to cancer risk, HI, and $PM_{2.5}$ concentrations. The individual health risks associated with each source were summed to find the cumulative health risk at the MEIR.

Based on the BAAQMD's Permitted Stationary Sources Risks and Hazards Screening Tool,[36] twenty existing stationary sources of TAC emissions were identified within 1,000 feet of the MEIR (Table V.B-10). The BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool was used to refine the screening values associated with these existing stationary sources to represent the attenuated health risks that can be expected with increasing distance from diesel engines, respectively.

Preliminary health risk screening values at the MEIR from exposure to mobile sources of TACs were estimated based on the BAAQMD's Bay Area modeling of health risks from highways, railroads, and major roadways with an average annual daily traffic (AADT) volume greater than 30,000 vehicles per day. According to the BAAQMD's modeling of mobile sources, there is no major roadway or highway within 1,000 of the MEIR.[37] The BAAQMD also recommends using the Roadway Screening Analysis Calculator to evaluate health risks from roadways with between 10,000 and 30,000 AADT. Based on review of 2020 average annual daily traffic (AADT) volumes forecasted by Alameda County Transportation Commission (ACTC),[38] there are four roadways with an AADT volume between 10,000 AADT and 30,000 AADT within 1,000 feet of the project site. The maximum potential health risks at the MEIR from mobile emissions along these roadways were estimated using the BAAQMD's Roadway Screening Analysis Calculator[39] and the cancer risks were adjusted using a factor of 1.3744 to account for the most recent health risk parameters recommended by OEHHA.[40]

There are nine proposed foreseeable future developments within 1,000 feet of the MEIR. Assuming an emergency generator is required for buildings with more than 7 stories, six of these developments could involve the operation of emergency diesel generators, as shown in Table V.B-9. The BAAQMD does not issue permits for stationary sources that result in an excess cancer risk greater than 10 in 1 million or a chronic HI greater than 1.0 at the source of emissions. Conservatively assuming each proposed generator would result in a maximum excess cancer risk of 10 in 1 million due to emissions of DPM, the BAAQMD's Risk and Hazards Emissions Screening

[36] Bay Area Air Quality Management District (BAAQMD), 2020b. Permitted Stationary Sources Risks and Hazards Screening Tool. Available at: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65, accessed December 21, 2020. Last updated on January 2, 2020.

[37] Bay Area Air Quality Management District (BAAQMD), 2014. BAAQMD Planning Healthy Places Highway, Major Street, and Rail health risk raster files.

[38] Alameda County Transportation Commission (ACTC), 2014. Countywide Travel Demand Model. Planning Area 1; 2020 Daily Model Vehicle Volumes, July.

[39] Bay Area Air Quality Management District (BAAQMD), 2015. Roadway Screening Analysis Calculator, April 16.

[40] Bay Area Air Quality Management District (BAAQMD), 2018. Personal communication between Patrick Sutton from Baseline Environmental Consulting and Areana Flores from the BAAQMD, February 5.

TABLE V.B-9 SUMMARY OF CUMULATIVE HEALTH RISKS AT THE MEIR

Sources	Source Type	Method Ref	Cancer Risk (10^{-6})	Chronic Hazard Index	$PM_{2.5}$ ($\mu g/m^3$)
Project					
Construction Emissions without health risk reduction measure[a]	Diesel Exhaust		46.5	0.03	0.14
Construction Emissions with health risk reduction measure[a]	Diesel Exhaust		7.2	<0.01	0.02
Emergency Generators	Diesel Generator	1	10.0	<0.01	<0.01
Existing Stationary Sources					
MCI dba Verizon Business (Plant #12765)	Generators	2,5	24.62	0.01	0.03
KRE 1330 Broadway Owner LLC (Plant #200393)	Generators	2,5	7.65	<0.01	0.01
Verizon Wireless (Telegraph & Broadway) (Plant #22412)	Generators	2,5	<0.01	<0.01	<0.01
Level 3 Communications LLC (Plant #18110)	Generators	2,5	0.40	<0.01	<0.01
CIM Properties (Plant #20345)	Generator, boiler	2,5	1.52	<0.01	0.01
Oakland 14th Office (Plant #14423)	Generators	2,5	0.48	<0.01	<0.01
City of Oakland Envr Scvs Division (Plant #14502)	Generators	2,5	0.12	<0.01	<0.01
Alameda County Employees Retirement Assn (ACERA) (Plant #16713)	Generators	2,5	0.05	<0.01	<0.01
Rotunda Partners II (Plant #16713)	Generators	2,5	0.51	<0.01	<0.01
Pacific Bell (Plant #13494)	Generators	2,5	11.69	0.02	0.02
AC Transit General Office (Plant #14532)	Generators	2,5	1.06	<0.01	<0.01
KRE 1221 Broadway Owners LLC (Plant #22058)	Generators	2,5	0.62	<0.01	<0.01
Oakland Marriott City Center (Plant #22781)	Generator, boiler	2,5	0.90	<0.01	<0.01
Windstream (Plant #23954)	Generators	2,5	0.06	<0.01	<0.01
City of Oakland Envr Scvs Division (Plant #14503)	Generators	2,5	0.07	<0.01	<0.01
East Bay Municipal Utility Dist (lant #13728)	Fire pump, generator (2)	2,5	3.01	0.01	0.10
KBS SOR II Oakland City Center LLC (Plant #24068)	Generators	2,5	0.32	<0.01	<0.01
CIM Group (Plant #17739)	Generators	2,5	0.02	<0.01	<0.01
Broadway Franklin LLC (Plant #22884)	Generator, fire pump, boiler	2,5	0.53	<0.01	0.01
FEMA (Plant #4779)	Generators	2,5	0.06	<0.01	<0.01
Existing Mobile Sources					
12th Street (22,409 AADT)	Mobile	3,4	1.9	NA	0.02
17th Street (23,204 AADT)	Mobile	3,5	1.7	NA	0.02
Harrison Street (13,725 AADT)	Mobile	3,6	0.9	NA	0.01

TABLE V.B-9 SUMMARY OF CUMULATIVE HEALTH RISKS AT THE MEIR

Sources	Source Type	Method Ref	Cancer Risk (10^{-6})	Chronic Hazard Index	$PM_{2.5}$ ($\mu g/m^3$)
Webster Street (11,566 AADT)	Mobile	3,7	1.5	NA	0.02
Future Stationary Sources					
2016 Telegraph	Generator	1,5	1.8	<0.01	<0.01
1314 Franklin	Generator	1,5	1.8	<0.01	<0.01
1433 Webster	Generator	1,5	0.8	<0.01	<0.01
1510 Webster	Generator	1,5	0.6	<0.01	<0.01
447 17th Street	Generator	1,5	0.5	<0.01	<0.01
1261 Harrison Street	Generator	1,5	0.5	<0.01	<0.01
Cumulative Health Risks Without Health Risk Reduction Measure[a]			**122**	<0.1	0.4
Cumulative Health Risks With Health Risk Reduction Measure[a]			83	<0.1	0.3
Cumulative Thresholds of Significance			**100**	**10.0**	**0.8**

Notes: **Bold and shaded** value exceeds the corresponding threshold.
$\mu g/m^3$ = micrograms per cubic meter; NA = not applicable; Ref=reference; AADT=annual average daily traffic
Health risk screening values derived using the following BAAQMD tools and methodologies:
1) BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version 4.0).
2) BAAQMD's Permitted Stationary Sources Risk and Hazards
3) BAAQMD's Roadway Screening Analysis Calculator.
4) BAAQMD's recommended Office of Environmental Health Hazard Assessment cancer risk adjustment factor.
5) BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.
[a] Requiring that all construction equipment of 100 horsepower or more to be equipped with engines certified to meet the California Air Resources Board's (CARB's) Tier 4 Final emissions standards, and that all construction equipment less than 100 horsepower to be equipped with engines certified to meet the CARB's Tier 2 emissions standards or higher and Level 3 diesel particulate filter (DPF).
Source: Attachment G.

Calculator (Beta Version 4.0) was used to estimate the equivalent screening-level health risks values for chronic HI and annual average $PM_{2.5}$ concentrations. The health risk screening values from the future generators were then refined based on the distance from each source to the MEIR using the BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.

Estimates of the cumulative health risks at the MEIR are summarized and compared to the City's cumulative thresholds of significance in Table V.B-9. With the implementation of construction engine requirement as a health risk reduction measure under SCA-AIR-5: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24), the excess cancer risk, chronic HI, and annual average $PM_{2.5}$ concentrations at the MEIR would be below the City's cumulative thresholds of significance. Therefore, the project's emissions of DPM and $PM_{2.5}$ during construction and operation would have a less-than-significant cumulative impact on nearby sensitive receptors. Overall, construction and operation of the project would not substantially increase the cumulative severity of significant impacts identified in the Program EIRs, nor would it result in

new significant impacts related to the generation of TAC emissions that were not identified in the Program EIRs.

Cumulative TAC Exposure

Future residents on the project site could be exposed to existing and reasonably foreseeable future sources of TAC emissions. While CEQA does not require the analysis or mitigation of potential effects that the existing environment may have on a project (with certain exceptions), the following HRA for future sensitive receptors on the project site meets the requirements of SCA-AIR-6: Exposure to Air Pollution (Toxic Air Contaminants) (#24).

The approach for assessing the cumulative health risks to future sensitive receptors on the project site was the same as the methods described above to determine potential health risks to existing sensitive receptors. Existing sources of TAC emissions identified within 1,000 feet of the project included 19 stationary sources in operation and four roadways with AADT volume greater than 10,000 AADT. Reasonably foreseeable future sources of TAC emissions include eight proposed developments that could potentially operate emergency diesel generators (Table V.B-10).

Estimates of the cumulative health risks on the future residents at the project site are summarized and compared to the City's cumulative thresholds of significance in Table V.B-10. The excess cancer risk, chronic HI, and annual average $PM_{2.5}$ concentrations at the project site were below the City's cumulative thresholds. Therefore, under SCA-AIR-6: Exposure to Air Pollution (Toxic Air Contaminants) (#24), the project is not required to incorporate health risk reduction measures into the project design to reduce the exposure of future residents to TACs.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to criteria air pollutants, TACs emissions, or cumulative TAC emissions. The project would be required to implement SCA-AIR-1: Criteria Air Pollutant Controls – Construction Related (#21), SCA-AIR-2: Dust Controls – Construction Related (#20), SCA-AIR-3: Asbestos in Structures (#26), SCA-AIR-4: Diesel Particulate Matter Controls – Construction Related (#22), and SCA-AIR-5: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24), and SCA-AIR-6: Exposure to Air Pollution (Toxic Air Contaminants) (#23) to ensure impacts to air quality would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

TABLE V.B-10 SUMMARY OF CUMULATIVE HEALTH RISKS AT THE FUTURE MEIR ON THE PROJECT SITE

Sources	Source Type	Method Ref	Cancer Risk (10^{-6})	Chronic Hazard Index	$PM_{2.5}$ ($\mu g/m^3$)
Project					
Emergency Generators	Diesel Generator	1	10.0	<0.01	<0.01
Existing Stationary Sources					
MCI dba Verizon Business (Plant #12765)	Generators	2,5	27.26	0.01	0.02
KRE 1330 Broadway Owner LLC (Plant #200393)	Generators	2,5	8.47	<0.01	<0.01
Oakland 14th Office (Plant #14423)	Generators	2,5	0.79	<0.01	<0.01
City of Oakland Envr Scvs Division (Plant #14502)	Generators	2,5	0.19	<0.01	<0.01
Alameda County Employees Retirement Assn (ACERA) (Plant #16713)	Generator, boiler (2)	2,5	0.09	<0.01	<0.01
Level 3 Communications LLC (Plant #18110)	Generators	2,5	0.60	<0.01	<0.01
CIM Properties (Plant #20345)	Generators	2,5	2.28	<0.01	<0.01
Rotunda Partners II (Plant #14607)	Generators	2,5	0.95	<0.01	<0.01
Verizon Wireless (Telegraph & Broadway) (Plant #22412)	Generators	2,5	<0.01	<0.01	<0.01
Pacific Bell (Plant #13494)	Generators	2,5	14.61	0.01	0.01
AC Transit General Office (Plant #14532)	Generators	2,5	1.32	<0.01	<0.01
City of Oakland Envr Scvs Division (Plant #14503)	Generators	2,5	0.11	<0.01	<0.01
KRE 1221 Broadway Owners LLC (Plant #22058)	Generator, boiler (2)	2,5	0.62	<0.01	<0.01
Oakland Marriott City Center (Plant #22781)	Generators	2,5	0.90	<0.01	<0.01
KBS SOR II Oakland City Center LLC (Plant #24068)	Generators	2,5	0.44	<0.01	<0.01
Windstream (Plant #23954)	Fire pump, generator	2,5	0.06	<0.01	<0.01
East Bay Municipal Utility Dist (Plant #13728)	Generators	2,5	3.01	<0.01	0.03
CIM Group (Plant #17739)	Generators	2,5	0.03	<0.01	<0.01
Broadway Franklin LLC (Plant #22884)	Generator, fire pump, boiler	2,5	0.67	<0.01	<0.01
Existing Mobile Sources					
12th Street (22,409 AADT)	Mobile	3,4	1.9	NA	0.02
17th Street (23,204 AADT)	Mobile	3,5	1.9	NA	0.02
Harrison Street (13,725 AADT)	Mobile	3,6	0.9	NA	0.01
Webster Street (11,566 AADT)	Mobile	3,7	1.6	NA	0.02
Future Stationary Sources					
1433 Webster	Generator	1,5	2.5	<0.01	<0.01

TABLE V.B-10 SUMMARY OF CUMULATIVE HEALTH RISKS AT THE FUTURE MEIR ON THE PROJECT SITE

Sources	Source Type	Method Ref	Cancer Risk (10^{-6})	Chronic Hazard Index	$PM_{2.5}$ ($\mu g/m^3$)
1314 Franklin	Generator	1,5	1.8	<0.01	<0.01
1510 Webster	Generator	1,5	0.9	<0.01	<0.01
447 17th Street	Generator	1,5	0.8	<0.01	<0.01
1261 Harrison Street	Generator	1,5	0.6	<0.01	<0.01
1100 Broadway	Generator	1,5	0.5	<0.01	<0.01
1700 Webster Street	Generator	1,5	0.4	<0.01	<0.01
1721 Webster Street	Generator	1,5	0.4	<0.01	<0.01
	Cumulative Health Risks		86	<0.1	0.1
	Cumulative Thresholds of Significance		**100**	**10.0**	**0.8**

Notes: **Bold and shaded** value exceeds the corresponding threshold.
$\mu g/m^3$ = micrograms per cubic meter; NA = not applicable; Ref=reference; AADT=annual average daily traffic
Health risk screening values derived using the following BAAQMD tools and methodologies:
1) BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version 4.0).
2) BAAQMD's Permitted Stationary Sources Risk and Hazards
3) BAAQMD's Roadway Screening Analysis Calculator.
4) BAAQMD's recommended Office of Environmental Health Hazard Assessment cancer risk adjustment factor.
5) BAAQMD's Diesel Internal Combustion Engine Distance Multiplier Tool.
Source: Attachment G.

C. BIOLOGICAL RESOURCES

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;	☒	☐	☐
c. Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;	☒	☐	☐
d. Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;	☒	☐	☐
e. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) by removal of protected trees under certain circumstances; or	☒	☐	☐
f. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR found all biological resources topics to either have no or less than significant impacts with implementation of applicable SCAs. The 1998 LUTE EIR found all potential biological resources impacts to be less than significant and therefore no mitigation measures or SCAs were required.

2. Project Analysis

Special-Status Species, Wildlife Corridors, Riparian and Sensitive Habitat, Wetlands, Tree and Creek Protection (Criteria 3.a through 3.f)

The project site is located within a developed area, the majority of which is covered with impervious surfaces. Wildlife and botanical resources present within the project site are adapted to disturbed, urban conditions and would not be adversely affected by implementation of the project. No riparian, wetland, or creek habitat exists within or adjacent to the project site. The project site contains no landscaping or street trees. For this reason, no SCAs related to biological resources would be required.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to special-status species, wildlife corridors, riparian and sensitive habitat, wetlands, and tree and creek protection than those identified in the Program EIRs. The Program EIRs did not identify any mitigation measures related to biological resources, and none would be needed for the implementation of the project. No SCAs related to biological resources would be required. Please see Attachment A for a full description of the applicable SCAs.

D. CULTURAL AND HISTORIC RESOURCES

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance **and** that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historic Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries.	☒	☐	☐

1. Program EIR Findings

1998 LUTE EIR

The 1998 LUTE EIR, which analyzed cultural and historic resources, found that impacts to these topics would be either significant but mitigatable, or less than significant. The 1998 LUTE EIR also found impacts related to archeological resources and demolition of historic resources would be less than significant with implementation of mitigation measures that are functionally equivalent to current SCAs.

Significant but mitigatable impacts included:

> G.2: Excavation of development sites consistent with the Land Use and Transportation Element could unearth archaeological resources. Some of these remains could have scientific or cultural importance.

G.3: Many of the City's historic resources are located Downtown and along transit corridors. Higher density uses are proposed in these areas and redevelopment is encouraged. This could have direct impacts by increasing the pressure to remove or demolish older buildings, including some historic structures.[41]

Mitigation measures proposed for significant impacts G.2 and G.3 included:

G.2: Establish criteria and interdepartmental referral procedures for determining when discretionary City approval of ground-disturbing activities should be subject to special conditions to safeguard potential archaeological resources.

G.3a: Amend the Zoning Regulations text to incorporate the new preservation regulations and incentives.

G.3b: Develop and adopt design guidelines for Landmarks and Preservation Districts.[42]

Less than significant impacts included:

G.1: Excavation of development sites consistent with the Land Use and Transportation Element could unearth palaeontologic remains. Some of these remains could have scientific importance. However, adoption of the proposed Element would not significantly affect these resources.

G.4: Increased development and more intense development in areas with high concentrations of older structures could have indirect impacts on these structures by changing their context and setting. Even if left intact, the integrity of older buildings could be compromised as larger, modern buildings are erected on adjoining properties. None required.

G.5: The Element's emphasis on adaptive re-use and live-work development could result in alteration of older buildings and historic structures in a manner that is architecturally incompatible with the structure.[43]

Mitigation measures were not proposed for any less than significant impacts.

<u>2011 Renewal Plan EIR</u>

Although the LUTE EIR found that mitigation would reduce significant impacts on cultural and historic resources to a less than significant level, the 2011 Renewal Plan EIR, which addresses much of the oldest part of Downtown Oakland, identified significant and unavoidable impacts to

[41] LUTE EIR, S-19 and S-20.
[42] Ibid.
[43] Ibid, S-28.

historic resources and cumulative cultural resources, even with implementation of SCAs and mitigation measures.

The 2011 Renewal Plan EIR included an assessment of known and unknown archaeological resources, paleontological resources, and human remains and found that impacts to these topics would be less than significant with implementation of SCAs. The 2011 Renewal Plan EIR also analyzed historic resources and cumulative cultural resources impacts and found these to be significant and unavoidable, even with implementation of SCAs and Mitigation Measure CUL-1, which would require the avoidance, adaptive reuse, or appropriate relocation of historically significant structures.

The 2011 Renewal Plan EIR included a list of selected historic resources located or partially located within the Central District Redevelopment Project Area, which contained the location of the subject project site.

The 2011 Renewal Plan EIR described:

> Although the Project Area has been surveyed by OCHS or others in the recent past, there are likely many other properties that have not yet been identified or evaluated for their potential historical significance, either at federal, state, or local levels. New information or new contexts may be discovered, or properties may not have been 50 years old at the time of the original surveys. By the end of the Redevelopment Plan time limit in 2023, buildings constructed before 1973 will have reached 50 years of age. As such, there may exist numerous other properties in the Project Area that are potentially eligible for listing at federal, state, and local levels and therefore could be considered historical resources for purposes of CEQA Section 15064.5.

The subject property was identified as being located within the Downtown Oakland Historic District (National Register), located on a block with several local register buildings. The project site was not in and of itself identified as a historic resource in the 2011 Renewal Plan EIR.

2. Project Analysis

The project would not involve the demolition or physical alteration of any building that is a listed historic resource, but the project site is located in and is part of the Downtown Oakland Historic District, a National Register district, which is a historical resource as defined under CEQA. The project site is also surrounded by many buildings that meet the definition of a historical resource under CEQA. Therefore, this analysis is focused on whether the project would result in a substantial adverse change in the significance of the Downtown Oakland Historic District or adjacent and nearby historical resources and compares any potential impact to those previously identified in the Program EIRs.

Cultural and historic resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. For the purposes of CEQA, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources, local register of historical resources, deemed significant under the criteria of Public Resources Code Section 5024.1, or formally recognized as a historical resource at the lead agency's discretion (CEQA Guidelines Section 21084.1). The Oakland General Plan Historic Preservation Element and the Oakland Cultural Heritage Survey classify and provide policy direction for the preservation of historic buildings of all types and of all degrees of significance.

To identify cultural resources within and near the project site, Page & Turnbull conducted site-specific historic research as well as review of information sources such as the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), the Office of Historic Preservation (OHP) Built Environment Resources Directory (BERD), and the City of Oakland Planning Department online parcel information portal.

Historical Resources (Criterion 4.a)

Project Site

The approximately 0.48-acre (20,974 square feet) project site is located on the west side of Franklin Street, between 14th Street (south) and 15th Street (north) within the National Register of Historic Places (National Register)-listed Downtown Oakland Historic District (Downtown Historic District) and City of Oakland Downtown Historic Area of Primary Importance (API).[44]

The project site is currently occupied by a parking lot that is surrounded on three sides (south, west, and north) by the side and rear façades of seven neighboring buildings. Of the 12 other properties on the block bounded by 14th Street, Broadway, 15th Street, and Franklin Street, all are within the Downtown Historic District and API and 10 are identified as contributors.

Review of Sanborn Map Company fire insurance maps indicates that the site contained three separate residential lots, each with a single residence, as of 1903 **(Figure 1)**. The Ye Liberty Theatre opened at the site in 1904. As depicted on an updated 1911 Sanborn map **(Figure 2)**, the theater occupied most of the parcel but featured a deep setback along Franklin Street. The entrance lobby to the theater was located at 1424 Broadway Street. Built as a venue for live performances as well as motion pictures, the theater was converted to exclusively show motion pictures and was renamed the Central Theatre in 1933.[45]

[44] The boundaries of the National Register-listed Downtown Oakland Historic District and City of Oakland Downtown Historic API are not entirely coterminous.

[45] "Curtain Coming Down for Theater," *Oakland Tribune*, February 3, 1960, 29.

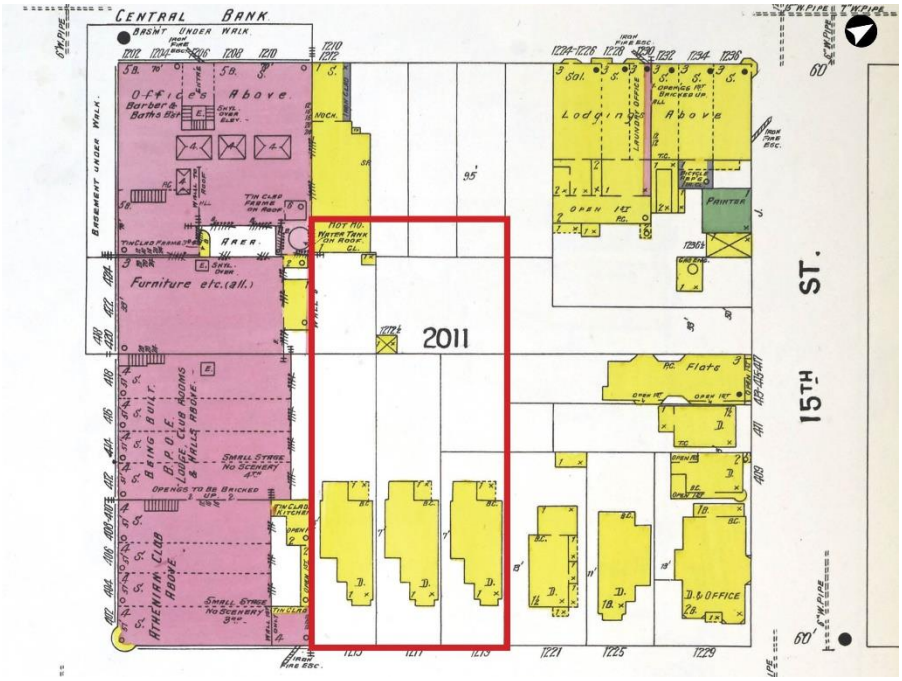


Figure 1: 1903 Sanborn map, volume 2, sheet 140, illustrating future project site (approximate boundary outlined red). Source: ProQuest Digital Sanborn Maps. Edited by Page & Turnbull.

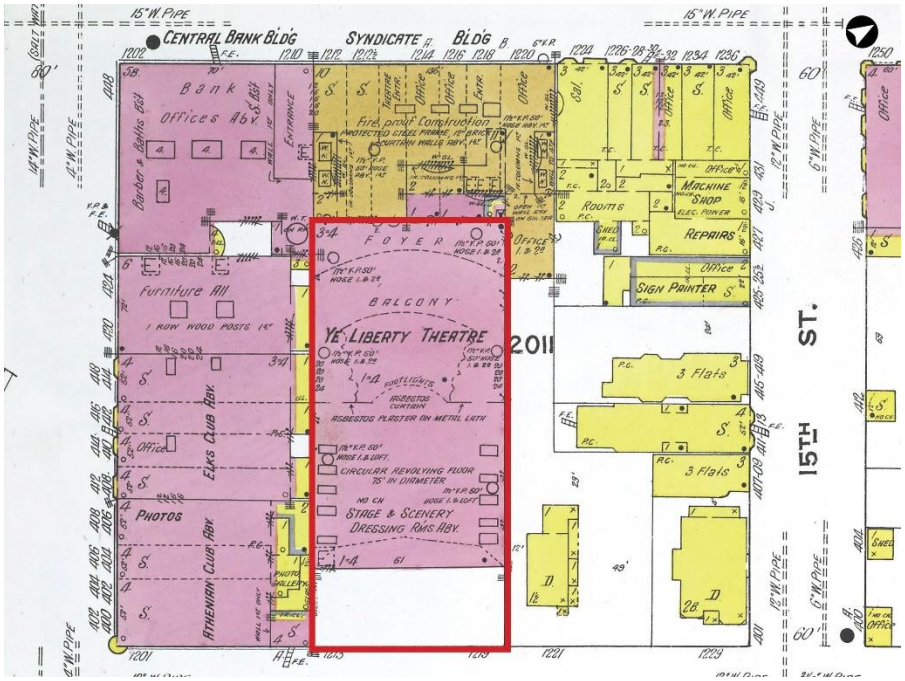


Figure 2: 1911 Sanborn map, volume 2, sheet 153, illustrating future project site (approximate boundary outlined red). Source: ProQuest Digital Sanborn Maps. Edited by Page & Turnbull.

By 1950, the theater had been expanded toward the east property line along Franklin Street, resulting in the building occupying the entire parcel **(Figure 3)**. Storefronts were located along Franklin Street, filling in the area of the site that was left open due to the theater's original setback. The *Oakland Tribune* reported in 1960, that the theater, "once one of Oakland's foremost legitimate theaters," and noted as containing one the first revolving stages installed in the United States, was slated for demolition and replacement by a 100-car, semi-private parking lot. Along with the theater, the five stores that fronted Franklin Street were also torn down.[46] Since 1960, the subject site has remained in use as a parking lot.

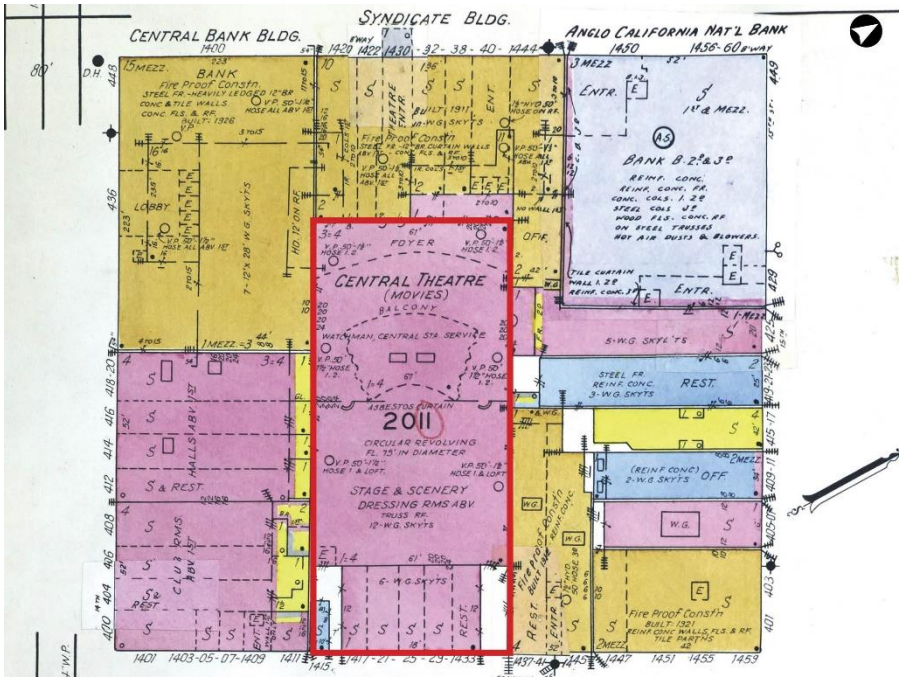


Figure 3: 1950 Sanborn map, volume 2, sheet 153, illustrating future project site (approximate boundary outlined red). Source: ProQuest Digital Sanborn Maps. Edited by Page & Turnbull.

At the request of Page & Turnbull, staff of the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University conducted a cultural resources records search on July 28, 2020 (NWIC File No. 20-0195). The records search for previously recorded sites and studies included the project site and a 0.25-mile radius, located on the USGS Oakland West 7.5' quadrangle. As previously noted, the project site is located within the National Register-listed Downtown Historic District. The project parcel was occupied by a parking lot at the time of district registration, and the 1998 National Register

[46] Ibid.

registration form for the Downtown Historic District identifies the parcel as "the largest gap in the district", rather than as a contributor or non-contributor.[47]

No additional previously recorded or evaluated individual resources located within the project site were identified in the NWIC records search results. Presence in the records search results does not indicate that a property has been found significant, only that it has been evaluated in a report submitted to the NWIC.

1431 Franklin Street is not listed as an individual property in the most recent available version of the California Office of Historic Preservation Built Environment Resources Directory (BERD) for Alameda County, dated March 3, 2020. Absence from this directory indicates that no record of a previous survey or evaluation of the individual property has been submitted to a CHRIS information center.

According to City of Oakland Planning Department online parcel information, the subject property is within the Downtown Historic API but has not been assigned an individual Oakland Cultural Heritage Survey (OCHS) rating.[48] The OCHS does not assign individual rating to vacant parcels.

The City of Oakland CEQA Thresholds of Significance Guidelines, dated December 16, 2020, offers guidance regarding the status of properties in the city which are considered historical resources under CEQA. In brief, properties which have been listed or found eligible for listing in the California Register; been assigned California Historical Resource Status Code of 5 or higher in an evaluation recorded on DPR 523 forms; or are included in the City of Oakland's Local Register are considered historical resources under CEQA. The Local Register includes all

> Designated Historic Properties (Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties); and Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance.[49]

While located within the Downtown Historic District and API, the subject property is neither a contributor to the National Register-listed district nor is it a contributor to the API.

[47] Oakland Cultural Heritage Survey, National Register of Historic Places Registration Form for the Downtown Oakland Historic District (Oakland: City of Oakland Community and Economic Development Agency, 1998), Section 7, page 7.

[48] Oakland Planning and Zoning Map. Available at: http://oakgis.maps.arcgis.com/apps/webappviewer/index.html?id=3676148ea4924fc7b75e7350903c7224, accessed October 28, 2021.

[49] City of Oakland, CEQA Thresholds of Significance Guidelines, December 16, 2020.

Surrounding Historic Resources

The project site is located at mid-block on the west side of Franklin Street, between 14th Street (south) and 15th Street (north) in downtown Oakland, within the Downtown Historic District and API. The city block containing the subject property includes 12 buildings, 10 of which are identified as contributors to the National Register-listed Downtown Historic District and API.

A radius of 0.25-mile from the project site was selected for identification of nearby individual resources, historic districts, and age-eligible properties. This radius includes the entirety of the Downtown Historic District and API, as well as other APIs, Areas of Secondary Importance (ASIs), and individual resources.

Attachment H lists individual, age-eligible properties within 0.25-mile of the project site which are listed on the Local Register, or which are identified as Potential Designated Historic Properties (PDHPs) within an API or ASI. Those resources which meet the City of Oakland Thresholds of Significance Guidelines for historical resources under CEQA are noted **(Figure 4)**. Of 113 properties meeting these criteria identified within the 0.25-mile radius, 65 are considered historical resources for the purposes of CEQA. Most individual CEQA resources within the 0.25-mile radius are also located in an API or ASI; only seven individually eligible historical resources are located outside of an API or ASI.

APIs and ASIs within 0.25-mile of the project site are described in the following paragraphs. APIs and ASIs provide the City of Oakland with a framework for evaluating properties within specific groupings or neighborhoods associated with significant property types and events in the city's history. There is at total of 55 APIs within the City of Oakland **(Figure 5)**. Of these, eight are within, or substantially within, a 02.5-mile radius of the project site **(Figure 4)**. One additional API overlaps slightly with the 0.25-mile radius. There is a total of 332 ASIs within the City of Oakland. Of these, five are within, or substantially within, a 0.25-mile radius of the project site. Two additional ASIs overlap slightly with the 0.25-mile radius.

PDHPs which are located within APIs are included in the Local Register and are thus historical resources under CEQA. Location within an ASI does not confer status as a historical resource under CEQA. However, some properties individually listed on the Local Register due to status as Designated Historic Properties, or OCHS ratings of "A" or "B", and which are therefore considered historical resources under CEQA, are also located within ASIs.

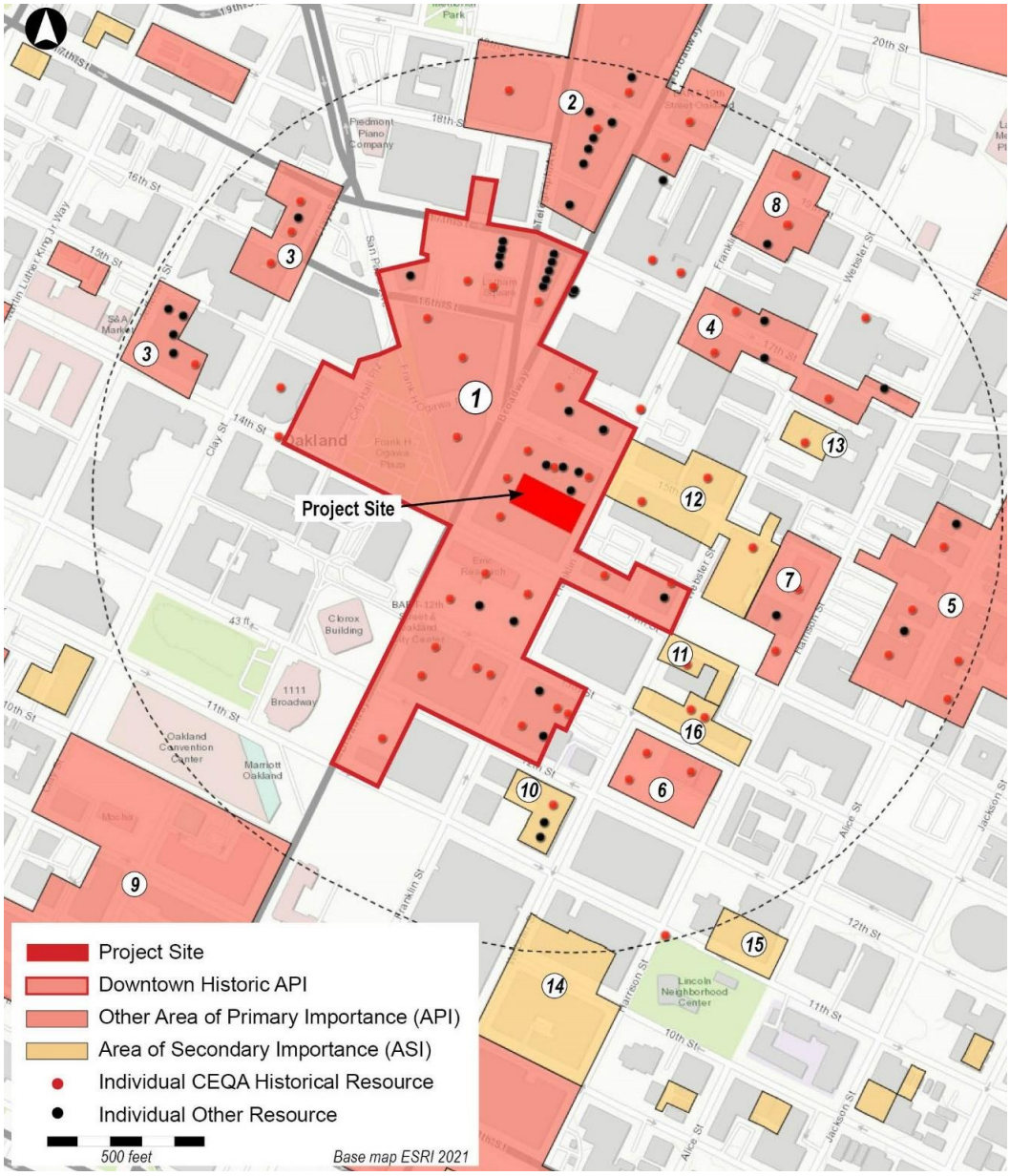


Figure 4. Individual resources, APIs, and ASIs within 0.25-mile radius of the project site. Numbers on APIs and ASIs correspond to text descriptions.
Source: City of Oakland and Page & Turnbull, 2021.

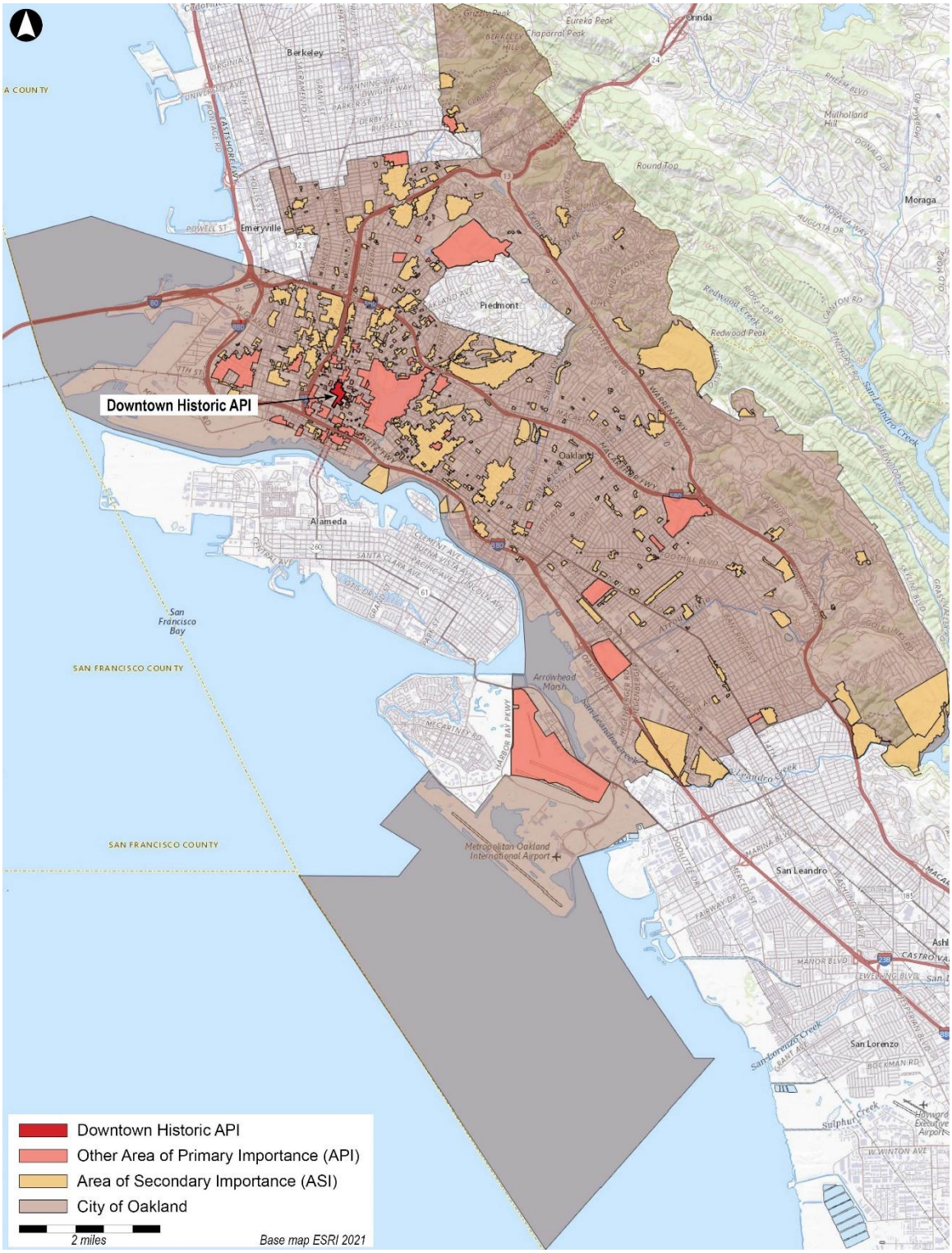


Figure 5. City of Oakland APIs and ASIs.
Source: City of Oakland, 2021.

Areas of Primary Importance (API) within 0.25-Mile Radius

Downtown Historic District API (Map No. 1)

The subject property is located within the Downtown Historic District API. This district was a hub of commerce throughout the first half of the 20th century, and occupies parts of 17 blocks, including the three full blocks bounded by Broadway, 15th Street, Franklin Street, 12th Street, City Hall and Frank Ogawa Plaza and several adjacent partial blocks. Notable buildings within the district include City Hall and its related plaza (Frank Ogawa Plaza), and several early 20th century buildings ranging in height from seven to 22 stories between 11th and 17th streets on Broadway, interspersed with many smaller one- to four-story commercial buildings.

The National Register District's period of significance is 1900-1948, and the district is significant under Criterion A (Events) for association with significant patterns of commercial development, commerce, and themes of politics and government that occurred within the district during the period of significance. Under Criterion C (Architecture), the district is significant as an assemblage of properties that embody the financial, institutional, and civic building typologies and architectural styles that defined the downtown during the period significance, many which were designed by prominent architects and provide distinguished architectural examples. The National Register nomination form for the district, prepared in 1998, describes its significance under this criterion as follows:

> Under Criterion C, the district is significant as a well-preserved example of the downtown commercial architecture of a larger American city in the first half of the twentieth century. The greatest number of its buildings, and the buildings that most strongly define its character, were built between 1903 and 1929, and represent the introduction into Oakland of the steel frame skyscraper, Beaux Arts-influenced architecture, and the City Beautiful movement. These urbane, ambitious buildings display a general unity of style and scale, and represent the work of many of the better-known Bay Area commercial architects of the period. In their siting and relation to each other, with 7- to 24-story skyscrapers punctuating lower construction, they represent an urban design termed "ideal" by City Beautiful planner Werner Hegemann in 1915, and gave Oakland a distinctive and much-photographed skyline that symbolized the city's prominence.[50]

The majority of the contributing buildings in the district were built between 1901 and 1929 and feature brick or masonry exteriors, two- or three-part vertical composition, classical ornamentation – often employing terracotta. District contributors constructed between 1906 and 1915 are described as having "strong stylistic unity" as follows:

[50] Oakland Cultural Heritage Survey, Downtown Oakland Historic, 39.

> Physically these buildings are tall (8 to 14 stories), slender, prominently sited on choice corner lots. They are of steel frame or concrete construction, with classical ornament, three-part vertical composition, prominent metal or terra cotta cornices, light-colored brick or terra cotta exteriors, skeletal articulation emphasizing a grid of windows, glass-fronted commercial ground floors, monumental office entries, and often a marble-paneled elevator lobby. They show the influence of the American Renaissance and City Beautiful movements in their lighter colors and massing, and classical rather than Victorian Gothic or Romanesque ornamentation. Where earlier brick blocks, at most four or five stories, had added height with ornamental cupolas and towers, these buildings were themselves the towers. White terra cotta and pale buff pressed brick became popular as facade materials, contrasting with the buildings' red common brick off-street sides. A ground floor bank might be distinguished from other commercial spaces by the absence of tall display windows, and by an imposing vault- or temple-like entry.[51]

The downtown area historically developed with most of its banks and tall office buildings on the east side of Broadway, and retailers on the west side. This pattern is particularly evident between 13th and 15th streets. Most of the district's buildings occupy the entirety of their parcels and abut neighboring buildings.[52] As stylistic trends changed through the district's development, later skyscrapers such as the Financial Center Building at the southwest corner of 14th and Franklin streets, built in 1928-1929, embraced Art Deco characteristics while maintaining the brick and terra cotta materiality of earlier towers.

District contributors additionally include groups of lower-rise commercial buildings constructed through the 1920s in two-part compositions, predominantly featuring brick and terra cotta cladding with broadly glazed ground floor primary façades.[53]

Two district contributors, 1411 and 1441 Franklin Street, are located immediately adjacent to the proposed project site at its Franklin Street frontage with secondary façades overlooking the project site:

- **1411 Franklin Street, Athenian Nile Club Building (1901-1902, Local Register, OCHS Rating B+a1+)**
    - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "a four-story stuccoed brick turn-of-the-century store and hall building on a corner lot, with stores in the ground floor base and club rooms in the upper three floors. The upper floors have a cylindrical corner bay and slightly projecting end bays. Most of the second and third floor windows are arranged in

[51] Oakland Cultural Heritage Survey, Downtown Oakland Historic, 43.

[52] Landmarks Preservation Advisory Board Staff Report, March 14, 2016,. Case File Number: SP16001. Available at: http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak057568.pdf, accessed April 22, 2020…

[53] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 45.

groups, with panels substituting for some of the windows. All the upper floor windows have deeply recessed double-hung wood sash, most with twelve-light upper sash. The window heights decrease toward the top floor. A cornice and pent roof wrap around the top of the corner bay, forming a low-pitched conical roof with ball finial, echoing the canopy roof over the hall entry on 14th Street. Some of the ground floor storefronts retain glazed wood entry doors and greenish-black marble splash panels."[54] The property does not appear to have changed significantly since this description was written in 1998.

- Relationship to Project Site: 1411 Franklin Street is located to the immediate south of the proposed project site, with its character-defining east façade overlooking Franklin Street. This east façade would be immediately adjacent to the proposed project when viewed from Franklin Street. The north façade, which currently overlooks the project site, consists of painted concrete with setback portions at the upper stories and various sizes and spacings of what appear to be original and non-original window openings.

- **1441 Franklin Street, Graneton (William)-Brownell Building (1924, PDHP, OCHS Rating C1+)**
  - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "1437-45 Franklin Street is a four-story Beaux Arts store and office building of reinforced concrete construction on an interior lot. The somewhat Venetian facade is designed in a three-part vertical composition with a two-story shaft and a fourth floor capital. The ground floor, which has been remodeled, has two tall recessed storefront bays flanking a recessed upper floor entry. The three upper floors are clad in variegated red pressed brick with mottled terra cotta quoins and other trim. The shaft has three two-story semicircular arched bays with tripartite Chicago-type windows and diamond pattern brickwork on the spandrels. The top floor has three groups of three arched windows separated by twisted engaged columns, and a dark red tile roof."[55] Since this description was written in 1998, the ground-floor storefronts and entry have been replaced, and the upper story wood-frame windows have been replaced with metal windows with matching configurations of lites. The buff-colored terracotta and red brick cladding at the primary façade have been painted a uniform white color, and a metal fire escape at the center bay has been removed.
  - Relationship to Project Site: 1437-45 Franklin Street is located immediately north of the proposed project site, with its character-defining east façade overlooking Franklin Street. This east façade would be immediately adjacent to the proposed project when viewed from Franklin Street. The south façade, which currently overlooks the project site, includes seven multi-lite metal frame windows at the second through fourth stories, and a non-historic mural.

[54] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 32.
[55] Oakland Cultural Heritage Survey, Downtown Oakland Historic District,22.

Four district contributors have rear façades which abut or overlook the subject property:

- **420 14th Street, Elks Hall-Scheeline (Louis) building (1929, Local Register, OCHS Rating Cb-1+)**
    - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "412-20 14th Street is a four-story brick commercial building on an interior lot, with four store spaces in the ground floor base and a lodge hall in the three-story upper section. The stuccoed and tiled Art Deco facade is divided into six bays by fluted piers with ornate pointed arch caps projecting above the parapet. The wider bays are further divided by minor pinnacled piers. The window and spandrel heights decrease toward the top floor. The spandrels in the narrow bays are clad with light gold terra cotta tiles with a triangular arch pattern of blue and green tiles. The ground floor storefronts have been remodeled."[56] The ground floor storefronts appear to have been modified some since this description was written in 1998, while the upper three stories at the primary façade appear to have remained unchanged.
    - Relationship to Project Site: The primary, south façade of 412-420 14th Street overlooks 14th Street, while its rear, north façade overlooks the proposed project site. The rear façade consists of painted brick with a row of arched window openings at the third story, with utility pipes and conduits, including plumbing vents and other utility lines, running vertically between the windows.
- **436 14th Street, Central Bank Building (1925-1926, Local Register, OCHS Rating A1+)**
    - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "1400-16 Broadway / 424-48 14th Street, the Central National Bank building, is a 16-story (or 15-story and mezzanine) steel-frame and reinforced concrete Beaux Arts skyscraper, rectangular in plan, on a southwest-facing corner lot. It was designed for a bank in its base and mezzanine levels, with offices above. The building is clad in brown brick with glazed brown terra cotta trim. Ornamentation is early Italian Renaissance, with Romanesque references in the round arches. The original base had giant arched entrances on each facade, high arched windows on the ground level, rusticated terra cotta walls, and bronze window and door frames. The base has been completely remodeled with flat red marble and tan terra cotta panels (further ground floor remodeling is anticipated, as of late 1997). The ten-story shaft, with bays of paired windows and recessed spandrel panels, is framed above and below by arcaded transitional stories with engaged columns. The two-story capital has arched bays of paired arched windows, below a tall, shallow, corbelled cornice."[57] The base appears to retain the non-original marble and terra cotta panels described in the 1998 description.

[56] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 33.
[57] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 13.

- Relationship to Project Site: The Central Bank Building is located at the southwest corner of the project site, which it overlooks at its north façade. Unlike many buildings on this block whose rear facades consist of unadorned concrete, the Central Bank building features brick cladding, regular rows of double-hung windows, arched window openings and cornices at the upper three stories, and a brick parapet with a square cutout pattern.

- **1440 Broadway, Realty Syndicate Building (1910-1911, Local Register, OCHS Rating A1+)**
  - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "1420-44 Broadway, the Realty Syndicate Building, is a Beaux Arts derivative office building, steel frame with brick curtain walls and concrete floors. It is 10 stories, rectangular in plan, on an interior lot. It is in a three-part vertical composition with a two-story rusticated stone base, a seven-story brick-clad shaft with terra cotta sills, and a one-story polychrome terra cotta capital. A horizontal organization of bays in the pattern 2-1-2-1-2 is carried through the full height of the building. The cornice is copper. Ornamental references are to Renaissance and Baroque architecture. The upper facade is unaltered. On the ground floor one of two monumental entries has been removed, and all storefronts have been remodeled.[58] The property does not appear to have changed significantly since this description was written in 1998.
  - Relationship to Project Site: The rear façade of the building at 1440 Broadway overlooks the project site. This façade consists of painted concrete surfaces, with recesses at the center and south parts of the façade, and regular rows of multi-lite windows at the second through ninth stories.

- **421 15th Street, Edward T. Foulkes Building (1924, Local Register, OCHS Rating Cb+1+)**
  - Description: The National Register nomination for the Downtown Oakland Historic District describes the property as follows: "419-21 15th Street is a small two-story steel frame and reinforced concrete building on an interior lot with an unusual marble front and metal classical ornament. It is a single-bay enframed window wall, originally designed for two stores on each level. The ground floor has been remodeled; the second floor retains its polished green-veined black marble surfaces and bronzed metal trim, framing an elongated Palladian window with a marble tympanum panel, pilasters, and slender urns. The facade terminates with a bronzed festoon band, a slightly projecting marble cornice, and a scrolled center parapet with bronzed urn finial."[59] The property does not appear to have changed significantly since this description was written in 1998.
  - Relationship to Project Site: The primary façade of 421 15th Street overlooks 15th Street between Franklin Street and Broadway. The rear of the building overlooks the proposed project site.

[58] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 15.
[59] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 35-36.

Four additional contributors to the Downtown Historic District / API are located on the same block as the proposed project parcel but are not directly adjacent:

- 401 15th Street, Oakland Title Insurance Building (1921-22, Local Register, OCHS Rating A1+)
- 405 15th Street (1922, PDHP, OCHS Rating C1+)
- 417 15th Street (1903, PDHP, OCHS Rating C1*)
- 449 15th Street (1947-48, Local Register, *b+1+)

Many, but not all, properties within the Downtown Historic District API were listed on the National Register of Historic Places in 1998 as contributing buildings within the Downtown Oakland National Register Historic District. Surface parking lots such as the subject parcel are not listed as either contributing or non-contributing properties in the National Register documentation for the district.

The International style office tower at 1330 Broadway, constructed in 1958, and Late Moderne building at 393 13th Street, constructed in 1950 within the Downtown Historic District and API were less than 50 years old when the National Register nomination was prepared in 1998. However, the nomination noted that these buildings are representative of the continuation of downtown commercial development, and that the tower at 1330 Broadway "remains compatible with the scale and rhythm of the district."[60] The National Register nomination and district boundary do not appear to have been updated since 1998, meaning that the boundary as determined for the National Register nomination has not been expanded or altered otherwise to include any additional contributing properties which reach 50 years of age. Therefore, the properties that were considered contributors as of 1998 appear to remain contributors, and likewise for non-contributing properties.

Recent construction of mid- and high-rise towers, along and within the two blocks immediately east of Broadway, has followed a trend of office tower construction in Downtown Oakland. Within the Downtown Historic District and API this pattern is represented by the 18-story tower addition and rehabilitation of the historic seven-story Key System Building completed in 2020 at 1100 Broadway.

Uptown Commercial Historic District API (Map No. 2)

The Uptown Commercial District API is located north of Downtown Oakland and north of the subject property along Broadway and Telegraph Avenue. The district is bounded on the north by 21st Street, on the east by Broadway, on the south by 17th Street, and on the west by Telegraph Avenue. The core of the district is located between the intersections of 19th and 20th streets on

[60] Oakland Cultural Heritage Survey, Downtown Oakland Historic, 6.

Broadway, roughly five blocks north of the project site.[61] The district contains 20 buildings, 13 of which are contributors. The district developed in the 1920s and 1930s with shopping and entertainment uses, and many buildings in Classical Revival, Beaux Arts, or Art Deco styles. The Uptown District represents an expansion of the central business district, with luxury shopping establishments such as the 1928 Capwell Store building (currently known as Uptown Station).[62] The district includes the Fox and Paramount Theaters, both designated as City Landmarks, among other similarly distinguished historic buildings. The Paramount Theater is the northernmost building in the district.

Downtown Fringe API (Map No. 3)

The Downtown Fringe API is located west of Broadway and includes several buildings constructed during the Downtown Historic District's period of significance which have been disconnected from the Downtown API core by development that occurred in the 1960s and later. Nonetheless, buildings within this API continue to represent the historic development of commerce in downtown Oakland, forming a distinct cluster west of Broadway.

17th Street Commercial District API (Map No. 4)

This API occupies both sides of the block between Franklin and Webster streets, in addition to the Howden Tile building on the southeast corner of Webster and 17th streets. This grouping of buildings consists of 1920s commercial buildings with long, low massing situated on shallow lots. Most buildings are two stories with a mezzanine and constructed of brick or concrete with abundant glazing at the primary façade. The district features streetscaping with street trees and period light standards. This block of 17th Street was developed with smaller parcels than those found in nearby downtown blocks during the downtown's eastward expansion toward Lake Merritt, cutting through formerly residential neighborhoods.[63]

Lakeside Apartment District API (Map No. 5)

The Lakeside Apartment District occupies portions of five blocks north of 14th Street near Lake Merritt, roughly three blocks east-northeast of the project site. The district is characterized mainly by two- to six-story wood-frame or brick apartment buildings from the 1910s and 1920s, built close together with little or no setbacks. The Malonga Casquelourd Arts Center (originally Women's City Club), built in 1927-28 is also in the district and is designated as an Oakland Landmark. Architectural styles are varied; building materials are primarily pressed brick with terra

[61] Uptown Shopping/Entertainment District – Historic Resources Inventory, 1985. On file at Oakland Cultural Heritage Survey, Oakland, California.

[62] Ibid.

[63] Landmarks Preservation Advisory Board Staff Report, March 14, 2016, Case File Number: SP16001. Available at: http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak057568.pdf, accessed April 22. 2020.

cotta, or stucco with wood or marble trim. Mid-20th century apartments fill in the long blocks north of the district along Alice, Madison, and Jackson streets, terminating at another early apartment cluster around 19th Street.

King Building Group API (Map No. 6)

The King Building Group consists of five neighboring buildings constructed between 1904 and 1922 that are situated within the block bound by 13th Street (north), 12th Street (south), Webster Street (west), and Harrison Street (east), which lies roughly two blocks southeast of the project site. The King Building Group was developed by the Charles H. King family and "constitute[s] the principal surviving Oakland structures associated with the wheat and lumber baron Charles H. king and his locally prominent descendants…the group provides a good and somewhat unusual example of an early 20th century downtown development project that was carried out in phases."[64] Buildings within the group are characterized by similar minimal setbacks, matching widths, pressed brick exteriors, glazed tile store bases, and Renaissance/Baroque ornamentation. Additionally, each building "occupies long street frontages and rises one to two stories, except for the four-story focal building."[65] Three of the corner buildings within the group feature similar unifying arcaded façades.[66]

Coit Building API (Map No. 7)

Coit Building Group consists of four neighboring buildings built between 1910 and 1920, located approximately two blocks east of the project site. The buildings within the group feature no setback, are one to seven stories in height and constructed of brick, and are identified as the Harrison and Coit Hotels, Harrison Apartments, and Coit Commercial Block. The group displays high architectural quality and is unified by surface materials, massing, articulation, ornamentation, and height. The Harrison Hotel is part of a ring of 1910s hotels within a few blocks of 14th and Broadway, built partly in anticipation of the 1915 Panama-Pacific International Exposition in San Francisco, which is a distinctive thematic feature of downtown Oakland.[67]

Leamington Hotel Group API (Map No. 8)

The Leamington Hotel Group API includes two adjoining reinforced-concrete buildings located at 1800-26 Franklin Street/365-89 19th Street, the southeast corner of 19th and Franklin streets,

[64] City of Oakland Planning Commission, Staff Report File Number PLN17-438, March 21, 2018. Available at: http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak069930.pdf, accessed September 3, 2020 .

[65] Ibid.

[66] Ibid.

[67] National Register of Historic Places Registration Form: Harrison and Fifteenth Streets Historic District, Oakland, Alameda County, California, prepared by Anne Bloomfield, May 3, 1996, entered into National Register November 7, 1996, Section 8, Page 8.

roughly five blocks north of the project site. The Leamington Hotel and its adjoined annex, containing office and assembly spaces, was designated as an Oakland Landmark in 1987.[68]

The hotel opened in 1926 and was designed by prominent architect William H. Weeks, blending popular Spanish Baroque Revival and Art Deco styles.[69] The nine-story buildings feature a three-part composition of base with mezzanine, shaft, and a capital level above the cornice line and are clad in glazed terra cotta and cement plaster with elaborate cast stone ornament. The group, along with the 1928 Capwell store at 20th Street and Broadway – one block west of the subject property – were significant in the development of Oakland's Uptown area as a luxury commercial district.[70]

Old Oakland API (Map No. 9)

The Old Oakland API is located to the southwest of the project site and is primarily associated with the emergence of Downtown Oakland in the 1870s, following the completion of the Transcontinental Railroad in 1869. A Staff Report prepared by the Oakland Landmarks Commission describes Old Oakland as follows:

> *Old Oakland* – predominantly 1870s central shopping, office, and hotel district associated with the arrival of the Transcontinental Railroad in 1869. It comprises most of the six square blocks bounded by Broadway, Jefferson, 7th, and 10th streets. Its 31 contributing buildings are mostly zero-setback rectangular blocks, 1 to 4 stories high, in styles reflecting their dates of 1870s-1910s. "Victorian Row" on 9th Street between Broadway and Washington is a solid block of Italianate commercial structures on both sides of the street, considered one of the most distinguished groups of late-Victorian commercial architecture in the West, and was a pioneering historic rehabilitation project in the 1980s. Old Oakland is a locally-designated S-7 historic district and has been formally determined eligible for the National Register; many of its buildings are also individually designated and on the National Register.

It appears that only one of the contributing historic resources located within this API, Delger Block #1 at 901-33 Broadway, lies within the 0.25-mile radius of the project site, standing on the southwestern edge of the project radius at the southwest corner of 9th and Broadway.

[68] Oakland General Plan, 1993. Historic Preservation Element, Appendix B, September 1993,, page B-1.

[69] Leamington Hotel, OaklandWiki. Available at: https://localwiki.org/oakland/Leamington_Hotel, accessed DecemberDecemeber 22, 2020.

[70] Oakland Cultural Heritage Survey, State of California Historic Resources Inventory Form: Uptown, May 31, 1984. On file at Oakland Cultural Heritage Survey.

Areas of Secondary Importance (ASI) within a 0.25-Mile Radius

12th and Webster Street ASI (Map No. 10)

The 12th and Webster Street ASI, located at the southwest corner of 12th and Webster streets, includes four buildings of varying architectural style that have retained varying degrees of historic integrity. The group is located roughly three blocks southeast of the project site. The Webster Block at 1127 Webster Street, a two-story Colonial Revival style commercial building with a brick exterior built in 1911, is listed on the local register. The remaining three buildings within the grouping include: 1101 Webster Street, a three-story altered Queen Anne-Colonial commercial building constructed between 1906-1907; 1115 Webster Street, a Mission Revival style two-story building known as the Robert Howden Store, built in between 1905-1906; and, 375 12th Street, a heavily altered two-story building with ground-floor stores and apartments above built in 1877-78. Each of these three buildings are PDHPs but are not assigned OCHS ratings that meet the definition of a historic resource under CEQA.

14th and Webster Street ASI (Map No. 11)

The 14th and Webster Street ASI is located along the south side of 14th Street and east of 14th Street contains includes three buildings constructed between 1917 and 1931 each with a height of one- to two-stories, including a mezzanine. 315 and 323 Webster Street feature classical ornamentation and terracotta exterior elements, generally good integrity. The one-story building at 347 Webster Street, located at the southeast corner of 14th and Webster streets and features a glazed terracotta façade with elaborate Art Deco detail. Windows appear to be replacements. Each of these three buildings are PDHPs but are not assigned OCHS ratings that meet the definition of a historic resource under CEQA.

15th and Webster Street ASI (Map No. 12)

The 15th and Webster Street ASI includes eight buildings, six of which are contributors, located within a 0.25-mile radius of the project site: the Landmark YWCA Building at 1515 Webster Street; Landmark White Building at 1464 Webster Street; Local Register property 389 15th Street; and three additional contributors categorized as PDHPs at 336, 363, and 369 15th Street. Buildings in this ASI are typically approximately two stories in height, excepting the YWCA Building, which is five stories.

17th and Webster Street Group ASI (Map No. 13)

This ASI consists of two adjacent properties, 1608 and 1614 Webster Street, located on the east side of Webster Street between 16th and 17th streets. 1608 Webster Street is a two-story Colonial Revival style office building constructed in 1924 is listed on the Local Register. 1614 Webster

Street is a three-story, mixed use (apartment-over) retail building built in 1906 that is categorized as a PDHP.

Chinatown Support ASI (Map No. 14)

The Chinatown Support ASI is located within the two city blocks bound by 11th Street (north), 9th Street (south), Harrison Street (east), and Webster Street (west), roughly five blocks southeast of the project site and at the southeastern edge of the 0.25-mile radius. The Chinatown Support ASI is located one block north of the Chinatown Commercial API, which lies outside of the 0.25-mile radius. The Chinatown Support ASI contains approximately nine properties with construction dates ranging from 1922 to 1959. Buildings within the district include: 303 10th Street, a two-story commercial building with a restrained Art Deco styling; 343 10th Street, a two- to three-story brick loft building constructed in 1923-1924.

258 and 270-76 11th Street Group ASI (Map No. 15)

This ASI includes adjacent buildings situated along the north side of 11th Street between Harrison Street (east) and Alice Street (west), opposite 11th Street of the site of Oakland Square (250 10th Street/Lincoln Square Park). 258 11th Street was built between 1929-30 and is a one-story-plus mezzanine light-industrial loft building with a brick exterior and steel industrial windows. 276 11th Street is a two-story Renaissance Revival style office building with a gold brick exterior and terracotta ornamentation. Each of these three buildings are PDHPs but are not assigned OCHS ratings that meet the definition of a historic resource under CEQA.

Hotel Menlo Group ASI (Map No. 16)

The Hotel Menlo Group includes four neighboring buildings located along the north side of 13th Street between Webster Street (west) and Harrison Street (east), roughly two blocks southeast of the project site. The Hotel Menlo at 348 13th Street was built between 1913-1914 and is listed on the local register. The seven-story hotel with store building is designed in an early twentieth century commercial style with Renaissance/Baroque detailing. The building has a three-part Classical composition with a beige brick exterior. The base of the building retains a prism glass transom, but storefronts have been altered. The heights of the neighboring buildings to the east of the Hotel Menlo step down toward the east. 330 13th Street is a five-story commercial-loft building constructed in 1923, with three prominent storefront bays that terminate with arches at the fifth story, beneath an ornate cornice. 320 13th Street is a locally listed property, built in 1920, which feature Italian Renaissance Revival style design, including classical ornamentation. 1307 Harrison Street, the Pelton-Faustina Building, is a two-story building and is designed in a restrained early 20th century commercial style with a gold brick

exterior. 330 13th Street and 1307 Harrison Street are PDHPs that are assigned OCHS ratings that do not meet the definition of historic resource under CEQA.

Individual Age-Eligible Properties within 0,25-Mile Radius

The buildings 45 years of age or older within a 0.25-mile radius of the project site vary in height from one to 24 stories, ranging from smaller commercial store buildings to prominent commercial-office towers such as the 14-story Oakland City Hall, 16-story Central Bank Building at 436 14th Street, and 22-story Oakland Tribune building. The buildings within a 0.25-mile radius of the project site range in date of construction from circa 1873, when Italianate commercial blocks and residential buildings found in Old Oakland and other were constructed, to 1975, when commercial-office towers of the more recent past were built (see Table V.D-1). The general character-defining features of buildings in the project vicinity include boxy, rectangular massing, with many properties featuring no setbacks. Commercial buildings of one to four stories in height and built between the 1870s and the 1920s reflect the Italianate and Baroque/Renaissance Revival and Beaux Arts styles that were construct in downtown Oakland between the late nineteenth and early twentieth centuries. Additionally, Art Deco and Modern architectural examples are found within 0.25-mile, including the Art Deco style Financial Center Building at 401-415 14th Street. Overall, these properties typically feature masonry, terra cotta, and granite exterior cladding materials with repetitive, uniform fenestration.

Project Discussion

A project would have a significant impact on historical resources if it would cause a substantial adverse change in the significance of a historical resource as defined by CEQA Guidelines Section 15064.5. Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." In the case of the proposed project, the resource to be physically altered is the Downtown Historic District and API, within which the subject parcel is located, through addition of a new building at a parcel currently occupied by a surface parking lot. The proposed project may also alter the character of the Downtown Historic District and API, changing the setting of adjacent and nearby district contributors.

The significance of a historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the California Register of Historical Resources or local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code; demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that

convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA[71].

In the City of Oakland, a "historical resource" has been defined as a property that is listed in or determined eligible for listing in the California Register of Historical Resources; a resource listed in Oakland's Local Register of Historical Resources, unless the preponderance of evidence demonstrates that it is not historically or culturally significant; a resource identified as significant (e.g., rated 1–5) in a historical resource survey recorded on Department of Parks and Recreation 523 Series forms, unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or a resource that is determined by the Oakland City Council to be historically or culturally significant.[72]

The proposed project includes new construction within a National Register and California Register designated historic district, a local API, as well as directly adjacent to individually significant or contributing historical resources located within the boundaries of the Downtown Oakland National Register Historic District and Downtown Historic API.

Proposed Project Description

The proposed project **(Figure 6** through **Figure 9)** would include a 40-story building with a maximum height at the main roof of 413 feet. The residential building design has been developed to refer to the stepped massing of nearby historic contributors to the Downtown Historic District and API such as the Tribune Tower at 13th and Franklin Streets, the Cathedral Building at 1615 Broadway, and the Oakland Bank of Savings Building at 1200 Broadway. It would include a five-story podium with a tower which would step back at the 6th, 18th, and 29th stories **(Figure 6)**. The rhythm of the proposed façades, both at the podium and tower levels, was developed to refer to the vertical emphasis of taller historic buildings in the Downtown Historic District and API like the 14-story Cathedral Building at 1615 Broadway, a district contributor which is also individually listed on the National Register. The podium and window opening heights of the proposed building were developed in direct response to the heights of openings at the primary facades of the adjacent district contributors, both four stories in height, at 1411 and 1441 Franklin Street **(Figure 7)**. The beige colored brick cladding proposed for the new building was selected to refer to that of the historic Rotunda Building, a contributor to the Downtown Historic District and API located on the west side of Telegraph Avenue between 15th and 16th streets. Other proposed exterior finishes include bronze metal fins distinguishing the building's bays at the podium and tower levels, and fully glazed facades and dark bronze-colored planters at 18th- and 29th-floor terrace levels.

[71] CEQA Guidelines, 2016. American Council of Engineering CompaiesCompanies, Sacramento, California.
[72] City of Oakland, CEQA Thresholds of Significance Guidelines, December 16, 2020..

Figure 6. Rendering of proposed project, view southwest.
Source: Large Architecture, July 29, 2022.

Figure 7. Rendering of proposed project, primary (east) façade podium level.
Source: Large Architecture, July 29, 2022.

Figure 8. Rendering of proposed project, view northwest. Source Large Architecture, July 29, 2022.

Figure 9. Rendering of proposed project, primary (east) facade podium level, view southwest from Franklin Street. Source: Large Architecture, July 29, 2022.

The façade plane of the proposed building would be coplanar with the façades of the two adjacent buildings facing Franklin Street, addressed 1411 and 1441 **(Figure 9)**. As is typical within the district, the building would extend to its front and side property lines. The top of the tower's podium level would correspond to the heights of the rooflines of the adjacent buildings, and floorplates within the podium level would align with those of the neighboring buildings to establish visual continuity of openings along the block face. The proposed full-height ground floor fenestration, which would align in height with that of 1441 Franklin Street to the north, would refer to the typical storefront glazing of commercial buildings within the district, while recessed portions and heavy vertical muntins and mullions would visually break up the ground floor façade to provide variation at the pedestrian level.

Potential Project Impacts

The following discussion of the potential impact of the proposed project to the Downtown Historic District and API is guided by the relevant general principles of the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, more specifically the Standards for Rehabilitation. These standards are typically used in review of proposed projects under CEQA as, according to CEQA Guidelines Section 15064.5(b)(3), a project which is found to comply with the appropriate standards within the *Secretary of the Interior's Standards for the Treatment of Historic Properties* is "considered as mitigated to a level of less than a significant impact on the historical resource."[73] As the project does not propose to physically alter individual historical resources or district contributors, the focus of the discussion below is informed by Rehabilitation Standards 9 and 10, which are relevant to related new construction:

> 9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
>
> 10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[74]

These standards primarily consider potential changes in the setting of districts and contributors which are nearby and adjacent to the project site. As one of the seven aspects of integrity defined by the National Park Service in guidance for the evaluation of historic properties, setting denotes

[73] Cal. Code Regs. Tit. 14, Section 15064.5(b)(3).

[74] Anne E. Grimer, The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings (Washington, D.C.: U.S. Departmetn of the Interior, National Park Service Technical Preservation Services, 2017), 76.

the physical environment of a historic resource or district, reflecting "the basic physical conditions under which a property was built and the functions it was intended to serve."[75] A resource's setting may include natural or built environment features, as well as "relationships between buildings and other features or open space."[76]

Potential Impacts – Architecture and Façade Characteristics

The downtown historic district is characterized by contributors which feature light colored brick or terracotta exteriors, metal and terracotta cornices, classical ornament, broadly glazed commercial ground floors, and a "skeletal articulation emphasizing a grid of windows."[77] The beige colored brick and metal finishes of the proposed building exterior would be compatible overall with the character of the district, as would the regular grid pattern of punched rectangular windows across the podium and tower levels. The ground-floor glazing, while not corresponding to individual commercial spaces as is the case with other nearby district contributors, would be visually divided into five bays, with a slightly recessed central entrance flanked on either side by two broadly glazed bays with proportions similar to those of nearby storefronts.

While employing materials, fenestration patterns, and ground floor proportions which reference and are compatible with the character of nearby district contributors, the proposed design for the residential building would be visually distinct as new. It would not include elements of false historicism or attempts to recreate the style of district contributors. The proposed brick cladding would be simple in design and would not emulate decorative bonds or color variations present on some district contributors. Decorative terracotta and metal moldings, such as those at the neighboring district contributor at 1441 Franklin, or classical details, such as at the neighboring district contributor at 1411 Franklin, are not proposed. The proposed tower would share linear vertical design features and a regular rectangular grid of punched openings with the adjacent tower at the Central Bank Building, 436 14th Street. It would not include arcaded stories, ornamented arched openings, or ornate cornices like the Central Bank Building. This relative simplicity would, when viewed at both the pedestrian level on Franklin Street and from greater distances, allow the more elaborate stylistic features of historic district contributors to remain visually prominent, despite the larger size of the new building at 1431 Franklin Street. The proposed building would not distract from or compete with the existing character of the Downtown Historic District and API in its materials or level of detail.

[75] National Park Service, National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (Washington D.C.: U.S. Department of the Interior, 1997), 45.

[76] Ibid.

[77] Oakland Cultural Heritage Survey, Downtown Oakland Historic District, 43.

Potential Impacts – Height and Massing

The proposed project would introduce a much taller building into the Downtown Historic District and API than neighboring and nearby district contributors. At 413 feet in maximum height, the residential tower project would be approximately 178 feet taller than the historic 16-story Central Bank Building at 436 14th Street, which is approximately 235 feet in height. Placement of a relatively tall tower within the heart of the downtown generally aligns with the historical and recent patterns of development in downtown Oakland in which, through successive decades, the city's tallest buildings or skyscrapers were constructed along the east side of Broadway. Within the Downtown Historic District and API, this is demonstrated by the 16-story Central Bank Building at 436 14th Street, built in 1925-1926, the 18-story International Style office tower at 1330 Broadway, built between 1956-1959 (297 feet in height), and the 18-story tower addition to the Key System Building at 1100 Broadway, completed in 2020 (269 feet in height). While the proposed project would be substantially taller than these existing buildings, the Downtown Historic District and API would retain its characteristic variation with taller buildings interspersed with shorter commercial buildings. This aspect of the district is tangible at the street level where groups of smaller buildings are interspersed with towers, and is also evident in the City's skyline when viewed from more distant perspectives within the district **(Figure 10** through **Figure 12)**.

Construction of the proposed building would fill a gap in the block that was historically occupied by the "Ye Liberty Theatre," demolished in 1960, and would thus obscure the side and rear facades of six contributors to the Downtown Historic District and API which currently overlook the project site. The side and rear façades of five of these contributors (1411 Franklin Street, 420 14th Street, 1440 Broadway, 421 15th Street, and 1441 Franklin Street), which date between 1901 and 1929, do not contain any features which are important to the character of the Downtown Historic District and API. Further, for the majority of the Downtown Historic District's 1900-1948 period of significance, the project site was occupied by the Ye Liberty Theater, a 3- to 4-story building which opened in 1904 and was demolished in 1960. By 1950, a row of one-story commercial buildings filled the setback between the rear of the theater building and the east property line. This theater building and later commercial buildings would have partially or fully obscured the side and rear façades of these five neighboring buildings from viewpoints on Franklin Street.

The upper stories of the rear, north- and east-facing façades of the L-shaped tower of the Central Bank Building at 436 14th Street include character-defining features, with a brick exterior and detailing similar to the building's prominent street-facing façades along 14th Street and Broadway. These rear-facing façades are currently visible from the Franklin Street public right-of-way between 14th and 15th streets through the proposed project site and would have been visible from Franklin Street above the roof of the Ye Liberty Theater building. The proposed project

Figure 10. Existing and proposed views within district, looking north along Franklin Street from 13th Street, proposed project is at left side of street.
Source: Large Architecture, July 29, 2022.

Figure 11. Existing and proposed views within district, looking south along Franklin Street from approximately one half block north of 15th Street, proposed project is at right side of street.
Source: Large Architecture, July 29, 2022.

Figure 12. Existing and proposed views from within district, looking southwest from Broadway and 17th Street. Proposed project is at left, Cathedral Building is at right.
Source: Large Architecture, July 29, 2022.

would result in a reduction of visibility of the rear of façade of the Central Bank Building at 436 14th Street from vantage points on 15th and Franklin streets. However, from other perspectives within the district and the vicinity, the Central Bank Building and other district contributors would retain the existing visibility of their primary façades, and the character-defining features which support their inclusion in the district.

While construction of the proposed building within the subject property would span the width of the parcel along Franklin Street, resulting in obstruction of the side and rear elevations of the neighboring buildings within the block, the new construction would not obscure the primary street-facing façades of any district contributors on the same block as the subject property.

Discussion – Integrity of the Downtown Historic District and API

In order to qualify for listing in any local, state, or national historic register, a property (such as a building, site, landscape, object, or district) must possess significance under at least one evaluative criterion as described above and retain integrity. Integrity is defined by the California Office of Historic Preservation as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance," or more simply defined by the National Park Service as "the ability of a property to

convey its significance."[78] Seven variables, or aspects, that define integrity are used to evaluate a resource's integrity—location, setting, design, materials, workmanship, feeling, and association. A property must possess most or all these aspects in order to retain overall integrity. If a property does not retain integrity, it can no longer convey its significance and is therefore not eligible for listing in local, state, or national registers.

The proposed project would most noticeably alter the character of the Downtown Historic District and API along Franklin Street, with perspectives along Franklin Street between 14th and 15th streets providing the clearest view of the new tower in relation to adjacent district contributors. When viewed from the west, the tower would appear behind contributors which face Broadway and would provide a differentiated and distinguishable backdrop to the Central Bank Building and buildings with lower heights to the immediate north. The location of the project site is at the eastern edge of the district and API where its boundary runs north-south along Franklin between 14th and 15th streets, with properties directly opposite Franklin Street outside of the district boundary. While introducing a distinctly new element, as discussed above, neither the materials and façade details nor the massing and height of the proposed project would significantly impair the ability of the Downtown Historic District and API or its contributors, which comprise numerous buildings across several blocks, to convey their historic character and significance.

The proposed fenestration, materiality and podium massing of the project would be compatible with the generally rectangular forms, masonry exterior materials, and fenestration patterns and types found at most properties of historic age in the vicinity. Heights in the district and API are varied; along Franklin Street the tower would appear much taller than adjacent buildings, but overall, its position in the core of the downtown would not be out of character in terms of the varied pattern of lower, one- to four-story buildings interspersed with early skyscrapers and more modern towers.

Contributing buildings would remain individually unaltered. The character-defining features that represent historic design, original materials, and provide evidence of workmanship associated with construction methods during the district's period of significance would remain intact. The Downtown Oakland Historic District and API would retain strong associations to the patterns of civic activity and commerce during the early to mid-twentieth century, conveyed by the design quality and stylistic features of its contributors. The new visual element introduced by the proposed building would not interfere with district contributors' ability to convey their significance to the extent that their eligibility for continued listing in the National Register as part of the Downtown Historic District or as contributors to the Downtown Oakland API would be

[78] California Office of Historic Preservation, *Technical Assistance Series No. 7: How to Nominate a Resource to the California Register of Historical Resources* (Sacramento: California Office of State Publishing, September 4, 2001) 11; U.S. Department of the Interior, National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Washington, D.C.: National Park Service, 1995) 44.

diminished. Future removal of the proposed project would leave the eligibility for national, state, and local listing of the Downtown Historic District and ASI unimpaired.

Potential Impacts – Other Nearby Resources

The closest nearby resources to the project site outside of the Downtown Historic District API include the Coit Building API at Harrison Street to the east, the 17th Street Commercial District to the northeast between Franklin and Harrison streets, the 14th and Webster Street ASI, 15th and Webster Street ASI, and Hotel Menlo Group ASI to the east. The areas between each API and ASI are defined by a variety of building types, styles, and land uses. Recent developments outside of historic districts, such as the 40-story Atlas building at the east side of Franklin Street between 13th and 14th streets, have created visual barriers between parts of the Downtown Historic District and API and nearby King Building Group API, 14th and Webster Street ASI, and Hotel Menlo Group ASI. While the proposed building would be visible from Franklin Street adjacent to the 15th and Webster ASI, this ASIs contributors are distinguished by details in material, such as terracotta and tile, which would not be altered or visually impacted by the presence of the proposed building.

Potential Impacts – Construction-Related Impacts to Adjacent Historical Resources

The project does not propose to physically alter existing buildings adjacent to the project site. However, due to the potential for the project to inadvertently physically impact neighboring buildings, including contributors to the Downtown Historic District, through vibration, mass excavation, or accidental mechanical damage, Standard Conditions of Approval and permit conditions should include measures for historic resource protection and damage reporting and repair for neighboring resources. These should include, at a minimum:

- Pre-construction survey of adjacent Downtown Historic District contributors to establish baseline documentation of existing conditions;
- Development and implementation of a vibration monitoring program for adjacent Downtown Historic District contributors;
- Historic resource protection training for site construction staff;
- Development and implementation of construction protection specifications for prevention of mechanical damage to adjacent Downtown Historic District contributors; and
- Construction monitoring and regular reporting.

<u>Potential Cumulative Impacts</u>

Several projects within the proposed Downtown Specific Plan Area have been completed or are under construction and located within 0.25-mile of the project site. These include:

- 1100 Broadway – The Key System Building (18-story tower addition cantilevering over an existing historic building, completed 2020).
- 385 14th Street – Atlas Tower (40-story residential tower replaced a parking lot, completed 2020).
- 1700 Webster Street (23-story tower replaced a non-historic building, completed 2020).
- 1721 Webster Street (25-story tower replaced a non-historic building, completed 2020).
- 301 19th Street/1889 Harrison Street (7-story building replaced surface parking, completed 2020).
- 1431 Jefferson Street (22-story building replaced surface parking, completed 2022).
- 1940 Webster Street (7-story building replaced a non-historic building, completed 2022).
- 1433 Webster Street (15-stories, proposed).
- 420 13th Street (stories not known, proposed).
- 1755 Broadway (38-stories, proposed).
- 415 20th Street (41-story tower, proposed).

Of these projects, the nearest to the proposed project site include 1100 Broadway, located southwest of the project site within the Downtown Historic District and API; 420 13th Street, located southwest of the project site within the Downtown Historic District and API; the Atlas Tower at 385 14th Street, located southeast of the project site on the southeast corner of 14th and Franklin streets, just outside of the Downtown Historic District and API; and 1433 Webster Street; located one block east of the project site outside the Downtown Historic District and API.

In combination with the currently proposed project, these completed and proposed projects would involve alteration of three separate parcels within the Downtown Historic District and API. The location of the 1100 Broadway project at the south edge of the district visually separates it from the proposed project site. The potential impact of a proposed project at 420 13th Street is not known, as insufficient details regarding that project are available. The nearby project at 1433 Webster Street would occur one block east of the eastern boundary of the Downtown Historic District and API and would not significantly alter the overall character of the district. The closest project, the Atlas building at 385 14th Street, is approximately 401-feet-tall and would be a similar height compared to the proposed project (approximately 400 feet), and occupies its entire block. The tower is surrounded on three sides by the Downtown Historic District and API boundary, at 14th Street, Franklin Street, and 13th Street. Construction of the proposed building at 1431 Franklin Street would introduce another new tower close to the 40-story Atlas building but would not cluster new development such that it would detract from the cohesiveness of the district.

Overall, review of these projects found that they did not or would not cause a significant impact individually or as part of cumulative impacts to the setting of the Downtown Historic District and API. No district contributors would be altered or demolished and the district, on the whole, would retain its setting and distinct groupings of contributing buildings.

Future, not-yet-identified, and hypothetical projects within the district boundary that potentially demolish contributing resources could create a significant cumulative impact on the historic district, depending on the location of future projects and the specific characteristics of the proposed project.

Summary of Potential Impacts

The proposed residential tower project at 1431 Franklin Street, located within the Downtown Historic District and API, would not cause an adverse material change to historical resources. The project does not propose to physically alter district contributors. Although the project would alter the Downtown Historic District and API by developing a parcel located within the district boundary, the proposed design of the building includes materials, fenestration patterns, and podium level massing which would be compatible with the materials and design of district contributors. The proposed building would not change the setting of the Downtown Historic District and API or its contributors to the extent that their eligibility for designation would be impaired. The relationship of these resources would still be apparent and distinguishable from the new construction brought into the district.

The project would not result in the removal of any character-defining features or cause a significant change in the setting of nearby APIs, ASIs, or individual historic outside the Downtown Historic District and API to the extent that their eligibility for listing at the local, state, or national level would be impaired.

Archaeological and Paleontological Resources and Human Remains (Criteria 4.b, 4.c, and 4.d)

Historic-period archaeological sites and deposits identified in the NWIC records search of a 0.25-mile radius around the project site include remnants of a street railway track along Webster and 11th streets (P-01-010530, P-01-010531), a ca. 1910 water-management feature that was part of a fire suppression system beneath the intersection of 12th and Franklin streets, and an abandoned concrete manhole beneath the existing public right-of-way on 17th Street west of Telegraph Avenue (P-01-010535). The Department of Parks and Recreation (DPR) forms on file with the NWIC for these sites and deposits do not include evaluations of significance.

Discovery of buried prehistoric materials was recorded during construction-related excavation in 1913 and 1928 at two locations (recorded in CHRIS records with primary numbers P-01-000042

and P-01-010994) within the 0.25-mile radius of the project site. The records on file with the NWIC for these locations do not include evaluations of significance.

The nearest previously recorded historic-period archaeological features within the vicinity of the proposed project site consist of transportation and water management infrastructure elements beneath public rights-of-way. As the project would not include excavation of public sidewalk or street areas, it is not anticipated that the project would encounter similar remains. However, there is potential for the presence of previously unrecorded historic-period archaeological deposits related to residential use of the site between the late 19th century and ca. 1903, and the Ye Liberty Theatre that occupied the site between 1903 and 1960. In addition, there is the potential for discovery of previously unrecorded prehistoric archaeological deposits within the project site.

No archaeological resources have been previously recorded at the project site. The project would entail excavation to a depth of approximately 9 feet below grade, as well as installation of cast-in-place piles or drilled piers. A July 2019 Preliminary Geotechnical Consultation letter prepared by Langan for the property reports that previous studies in the vicinity have identified between 2.5 and 8 feet of fill underlain by Merritt Sand.[79] As studies have not yet been conducted at the project site, the depth and nature of fill, and previous ground disturbance by development at the site has not yet been identified. Sanborn maps from 1889 and 1903 do not indicate that the three residential buildings occupying the project site had basements. Two small structures depicted on the 1889 map at the rear of the two southernmost parcels (absent from the 1903 map) may correspond to outhouse locations.[80] The depth of disturbance and construction associated with the Ye Liberty Theatre's revolving floor, as noted in 1911 and 1950 Sanborn Maps, is not known.[81] As the project site was developed with only a paved parking lot following demolition of the theater, there is the possibility for subsurface remains associated with both the theater and earlier historic-period uses to be preserved under the current parking lot surface. As noted above, there is also potential for discovery of previously unrecorded prehistoric archaeological resources at the project site.

The project would be required to implement the City's SCAs related to the discovery of archaeological resources, paleontological resources, and human remains during project-related construction, as identified in Attachment A, including: SCA-HIST-1: Archaeological and Paleontological Resources – Discovery During Construction (#32) and SCA-HIST-2: Human Remains – Discovery During Construction (#34). Implementation of these SCAs during project-related geotechnical testing, demolition of the existing parking lot surface, and project-related

[79] Langan, 2019. Preliminary Geotechnical Consultation for 1431 Franklin Street. July 31.

[80] Sanborn Map & Publishing Co., Oakland, California, 1889, Sheet 8; Sanborn Map Company, Insurance Maps of Oakland, California, Volume 2, 1903, Sheet 140.

[81] Sanborn Map Company, Insurance Maps of Oakland, California, Volume 2, 1911 and 1950, Sheet 153.

ground disturbance would reduce potential adverse effects that could result from project activities to a less-than-significant level. Therefore, the project would have a less-than-significant impact to previously unrecorded archaeological or paleontological resources.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to historical resources or archaeological and paleontological resources than those identified in the Program EIRs. In addition, the project would not demolish any built environment historical resources. Implementation of SCA-HIST-1: Archaeological and Paleontological Resources – Discovery During Construction (#32), and SCA-HIST-2: Human Remains – Discovery During Construction (#34), would ensure impacts to cultural resources would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

E. ENERGY

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	☒	☐	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR included an analysis of energy resources related to supply and need for additional energy facilities and found that impacts to these topics would be less than significant and would not require mitigation measures or SCAs.

The 1998 LUTE EIR included an analysis of energy consumption and found that impacts would be less than significant and would not require mitigation measures or SCAs.

2. Project Analysis

Energy Consumption and Local and State Plans (Criteria 5.a and 5.b)

The project would be required to comply with the standards of Title 24 of the California Code of Regulations. In addition, the project would be required to implement SCA-UTIL-5: Underground Utilities (#82), which requires all new gas, electric, cable, and telephone facilities underground, and SCA-UTIL-6: Green Building Requirements (#84), which requires compliance with the green building ordinance. The project is required by City of Oakland standards to earn LEED Silver, which would require further energy efficiency measures.

The project would also be consistent with the City's 2030 Equitable Climate Action Plan (ECAP), which is intended to identify an equitable path toward cost-effectively reducing the City's local climate emissions, transitioning away from fossil fuel dependence, and ensuring that all of the City's communities are resilient to the foreseeable impacts of climate change. More information related to the ECAP is provided in *Section V.G, Greenhouse Gas and Climate Change*, below. Specific project design features consistent with the ECAP include, but are not limited to, provision of bicycle parking and less than half of the maximum allowable parking, compliance with the Transportation Demand Management plan, certification of Leadership in Energy and Environmental Design (LEED) Silver rating, and most notably, exclusion of any natural gas hook-

ups. Compliance with the ECAP would further reduce potential impacts related to energy consumption.

As described above, implementation of SCAs and adherence with Title 24 and City of Oakland requirements would ensure no significant impacts related to energy would occur.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any new or more severe significant impacts related to energy than those identified in the Program EIRs. Implementation of SCA-UTIL-5: Underground Utilities (#82), which requires all new gas, electric, cable, and telephone facilities underground, and SCA-UTIL-6: Green Building Requirements (#84), as well as compliance with Title 24 and City of Oakland policies would ensure that impacts to energy resources would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

F. GEOLOGY, SOILS, AND GEOHAZARDS

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Expose people or structures to substantial risk of loss, injury, or death involving:	☒	☐	☐
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;			
ii. Strong seismic ground shaking;			
iii. Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or			
iv. Landslides;			
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property; result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR included an analysis of geology, soils, and geohazards and found that impacts to these topics would be less than significant with implementation of SCAs.

The 1998 LUTE EIR included an analysis of geology, soils, and geohazards and found that impacts to these topics would be less than significant and would not require mitigation measures or SCAs.

2. Project Analysis

Exposure to Risk of Loss, Injury, or Death Involving Fault Rupture, Seismic-Related Shaking, Liquefaction, Lateral Spreading, Subsidence, or Collapse, or Landslides (Criterion 6.a)

The project site is in a seismically active region, and the nearest active fault is the Hayward Fault, which is located approximately 3 miles northeast of the project site.[82] The project site would

[82] California Geological Survey (CGS), 2010. Fault Activity Map of California (2010). Available at: http://maps.conservation.ca.gov/cgs/fam/, accessed August 27, 2020.

experience strong to very strong shaking in the event of a major earthquake on a nearby active fault.[83]

The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone.[84] Therefore, the project would not result in significant impacts with respect to rupture of a known earthquake fault. The project site is also not within an earthquake-induced landslides hazard zone or liquefaction hazard zone mapped by the California Geological Survey (CGS).[85] Based on the relatively flat topography of the project site and surrounding area, landslides would not pose a risk to the project. The project site is fairly level, and there are no free faces that could be susceptible to lateral spreading near the project site. Therefore, potential impacts related to lateral spreading would be less than significant.

A Preliminary Geotechnical Consultation[86] was prepared for the project using data previously collected from the site vicinity to evaluate the potential for earthquake-induced geologic hazards including strong ground shaking, liquefaction, and cyclic densification (also referred to as seismic densification) in the vicinity of the project site. The findings of Preliminary Geotechnical Consultation are summarized below.

Borings at nearby sites encountered approximately 2 to 8 feet of fill material below the ground surface. The fill consists of light-brown to yellow-brown, loose to medium dense silty sand and silty sand with gravel. The fill is underlain by Merritt Sand which consists of medium dense to very dense clayey sand, sand with clay, and silty sand and extends to depths of approximately 20 to 44 feet. Below this layer are very stiff to hard silty clay, clay, clay with sand, sandy clay, and silt with occasional dense sand layers and gravel layers extending to depths greater than 390 feet. The anticipated high groundwater level at the project site would be approximately 20 feet deep. Fluctuations in groundwater levels are expected and occur due to many factors including seasonal fluctuation, tides, underground drainage patterns, regional fluctuations, and other factors.[87]

The Preliminary Geotechnical Consultation included preliminarily estimates of up to 1-inch of potential liquefaction induced settlement in saturated soils and approximately 0.5-inch of seismic densification induced settlement in cohesionless soil above the groundwater level at the project site during a seismic event.[88]

The Preliminary Geotechnical Consultation indicated that the primary geotechnical issues for the project are: 1) strong ground shaking and seismic hazards; 2) likely presence of a variable thickness and quality of fill; and 3) appropriate foundation system(s) for the new building. The

[83] Langan, 2020. Preliminary Geotechnical Consultation, 1431 Franklin Street, Oakland, California, April 30.
[84] California Department of Conservation, 1982. Special Studies Zones, Oakland West, January 1.
[85] California Geological Survey (CGS), 2003. State of California Seismic Hazard Zones, Oakland West Quadrangle Official Map, February 14.
[86] Langan, 2020, op. cit.
[87] Ibid.
[88] Ibid.

Preliminary Geotechnical Consultation included the following preliminary conclusions and recommendations:[89]

- The project site could be underlain by 2 to 10 feet of fill. Because the proposed structure would be at-grade, the potential variability in thickness and quality/relative density of the fill should be evaluated further with respect to differential settlement.
- The proposed structure should be supported on a deep foundation system consisting of augured cast-in-place piles or drilled piers that derive their load carrying capacity from skin friction in the Merritt Sand and the underlying very stiff to hard clay.
- A design level geotechnical investigation should be performed prior to design of the building foundations for the selected design scheme to confirm the preliminary geotechnical conclusions and recommendations. This investigation should include drilling borings and advancing cone penetrometer tests, as necessary, to evaluate subsurface conditions and obtain soil samples for laboratory testing and analyses. Following the design level investigation and analyses, the geotechnical engineer can provide recommendations for design of the geotechnical aspects of the project.

The Preliminary Geotechnical Consultation also provided preliminary recommendations regarding seismic design criteria, including using Site Class D (stiff soil).[90]

The project would be required to comply with the City's SCAs related to geology and soils prior to approval of construction-related permits. This includes SCA-GEO-1: Construction-Related Permit(s) (#36) which would require the project to comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction. The project would also be required to comply with SCA-GEO-2: Soils Report (#37) which would require the project to submit a soils report prepared by a registered geotechnical engineer for City review and approval which includes field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The recommendations contained in the approved soils report must be implemented during project design and construction.

Compliance with SCAs, as discussed above, would ensure that the project would be designed and constructed to account for and withstand seismic and geologic hazards which could have adverse effects on the project and adjacent properties, thereby minimizing exposure of people and structures to substantial risk of loss, injury, or death during a large regional earthquake. Therefore, the project would not result in significant impacts with respect to ground shaking and seismic-related ground failure.

[89] Ibid.
[90] Ibid.

Expansive Soil, Erosion or Loss of Topsoil, Creating Substantial Risks to Life, Property, or Creeks/Waterways. (Criterion 6.b)

Soils that are clayey could have expansive properties when subject to varying moisture conditions. The Preliminary Geotechnical Consultation[91] indicated that the vicinity of the project site is underlain by fill materials (silty sand and silty sand with gravel), Merritt Sand (which is generally not very clayey), and stiff to hard clay. The fill material and Merritt Sand in the vicinity of the project site would not have expansive properties based on the high sand content of these soils, and the stiff to hard clay was identified below the anticipated depth of the water table at the project site, which reduces the potential for shrinkage and expansion. The nature of fill materials directly beneath the project site has not yet been evaluated; however, if the site-specific soils report (as required by SCA-GEO-2) identifies expansive soils beneath the project site, implementation of the recommendations in the soils report would ensure that potential hazards associated with expansive soils would be mitigated to a less-than-significant level through appropriate design and construction practices (e.g., removal of the expansive soils and placement of non-expansive engineered fill, treatment of the expansive soils, and/or appropriate drainage).

As discussed in detail in *Section V.I, Hydrology and Water Quality*, of this document, soil erosion could occur during project grading and construction. However, as described in Section V.I, implementation of SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48) would reduce the potential impacts related to erosion of topsoil to a less-than-significant level.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to geology, soils, and geohazards than those identified in the Program EIRs. Implementation of SCA-GEO-1: Construction-Related Permit[s] (#36), SCA-GEO-2: Soils Report (#37), and SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48) would ensure impacts related to geology, soils, and geohazards would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

[91] Ibid.

G. GREENHOUSE GAS AND CLIMATE CHANGE

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. For a project involving a stationary source) produce total emissions of more than 10,000 metric tons of CO_2e annually.	☒	☐	☐
b. For a project involving a land use development, fail to demonstrate consistency with the 2030 Equitable Climate Action Plan (ECAP) adopted by the City Council on July 28, 2020. Consistency with the 2030 ECAP can be shown either: • Committing to all the greenhouse gas (GHG) emission reductions strategies described on the ECAP Consistency Checklist, or • Complying with the GHG Reduction Plan Standard Condition of Approval that requires a project-level GHG Reduction Plan quantifying how alternative reduction measures will achieve the same or greater emissions than would be achieved by meeting the ECAP Consistency Checklist.	☒	☐	☐

1. Program EIR Findings

Climate change and greenhouse gas (GHG) emissions were not expressly addressed in the 1998 LUTE EIR. Since information on climate change and greenhouse gas emissions was known, or could have been known, when the Program EIR was certified, it is not actually new information as specifically defined under CEQA. This is consistent with the First District Court of Appeal's ruling in Concerned Dublin Citizens v. City of Dublin, 214 Cal.App.4th 1301 (2013).

The 2011 Renewal Plan EIR found all impacts related to GHG emissions and climate change to be less than significant with implementation of applicable SCAs. The 2010 Housing Element Update EIR and its 2014 Addendum identified less-than-significant GHG impacts with the implementation of applicable City of Oakland SCAs. No mitigation measures were necessary. The current project would be subject to the City of Oakland's SCAs.

2. Project Analysis

Greenhouse Gas Emissions Generation from Stationary Sources (Criterion 7.a)

The City's threshold of significance recommends that the GHG emissions from a project's stationary sources be analyzed separately and compared to the threshold of significance for stationary sources of 10,000 metric tons of carbon dioxide equivalents (MTCO2e) per year. The project would be required to operate an emergency generator for the elevator system, which must comply with the BAAQMD's permit requirements for a stationary source. It was assumed that one 1,000-kilowatt diesel generator would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance). As shown in Table V.G-1, the annual emissions of 26 metric tons CO_2e from the emergency diesel generator are substantially below the City's threshold of 10,000 CO_2e for stationary sources. Therefore, routine testing and maintenance of the emergency generator would have a less-than-significant impact on global climate change.

TABLE V.G-1 SUMMARY OF AVERAGE GHG EMISSIONS FROM EMERGENCY GENERATOR

Stationary Source	CO_2e (MT/Year)
Emergency Generator	25.6
Threshold of Significance	10,000
Exceed Threshold?	**No**

Note: MT = metric tons
Source: See Attachment G.

Consistency with the Equitable Climate Action Plan (Criterion 7.b)

Both BAAQMD and the California Air Pollution Control Officers Association ("CAPCOA") consider GHG impacts to be exclusively cumulative impacts in that no single project could, by itself, result in a substantial change in climate. Therefore, the evaluation of GHG emissions impacts evaluates whether the project would make a considerable contribution to cumulative climate change effects. The City of Oakland's current adopted thresholds for GHG emissions rely upon the technical and scientific basis for the City's 2030 Equitable Climate Action Plan (ECAP), which provide substantial evidence that adherence to the 2030 ECAP action items will achieve GHG emissions reduction targets of 56 percent below 2005 levels by 2030 and 83 percent below 2005 levels by 2050. These reduction targets are more aggressive than the State's adopted 2030 reduction target of 40 percent below 1990 levels (per AB 32). Therefore, reductions below the City of Oakland's efficiency metric also meet the State's adopted 2030 goals.

The City's threshold of significance recommends that land use development projects demonstrate consistency with the 2030 ECAP, pursuant to CEQA Guidelines Section 15064.7. The goal of the ECAP is to identify an equitable path toward cost-effectively reducing the City's local climate emissions a minimum of 56 percent below the 2005 level by 2030, transitioning away from fossil fuel dependence, and ensuring that all of the City's communities are resilient to the

foreseeable impacts of climate change. The actions and strategies identified by the ECAP were designed to meet equitable, realistic, ambitious, balanced, and adaptive criteria. The ECAP provides updated actions and strategies to bridge the gaps between the business-as-usual GHG emissions and the City's 2030 and 2050 GHG reduction goals. The ECAP, as a policy roadmap for the City's transition to a low-carbon economy, addresses potential GHG reductions in the following sectors: Transportation and Land Use, Buildings, Material Consumption and Waste, Adaptation, Carbon Removal, City Leadership, and Port of Oakland.

The City's threshold of significance determines whether a development project complies with the ECAP and the City's GHG emissions reduction targets using the ECAP Consistency Review Checklist (the ECAP Checklist). A project's impact related to GHG emissions generation is considered less than significant if the project completes the Checklist and can qualitatively demonstrate compliance with the Checklist items.

The project's ECAP Checklist indicates that the project's design would meet all the applicable requirements for Transportation and Land Use, Buildings, Material Consumption and Waste, and Carbon Removal.[92] Specific project design features consistent with the ECAP include, but are not limited to, provision of bicycle parking and less than half of the maximum allowable parking, compliance with the Transportation Demand Management plan, certification of Leadership in Energy and Environmental Design (LEED) Silver rating, and exclusion of any natural gas hook-ups. The ECAP Checklist's requirements related to City Leadership and Adaptation are not applicable to the project. Therefore, the project would be consistent with the City's 2030 ECAP.

Other SCAS required by the City could also reduce GHG emissions further. These include but are not limited to preparation and implementation of a Transportation and Parking Demand Management (TDM) Plan under SCA-TRANS-1: Transportation and Parking Demand Management (#77); compliance with green building requirements under SCA-UTIL-6: Green Building Requirements (#84); and Construction and Demolition Waste Reduction and Recycling Plan under SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#81).

Overall, the project's GHG emissions from the land use developments would have a less-than-significant impact related to GHG emissions generation. Furthermore, the project would not substantially increase the severity of significant impacts identified in the Program EIRs, nor would it result in new significant impacts related to GHG emissions that were not identified in the Program EIRs.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related GHG emissions than those identified in the

[92] City of Oakland, 2021. Equitable Climate Action Plan Consistency Checklist for the 1431 Franklin Project (residential). September 13.

Program EIRs. Implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#77), SCA-UTIL-6: Green Building Requirements (#84) and SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#81) (discussed further in *Section V.O, Utilities and Service Systems*), would ensure impacts to GHG and climate change would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;	☒	☐	☐
c. Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;	☒	☐	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., the Cortese List) and, as a result, would create a significant hazard to the public or the environment;	☒	☐	☐
e. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school;	☒	☐	☐
f. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions; or	☒	☐	☐
g. Fundamentally impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR found that all impacts to hazards and hazardous materials would be less than significant with implementation of applicable SCAs. The 2010 Housing Element Update EIR identified no significant impacts and therefore cited no mitigation measures or SCAs related to hazards and hazardous materials.

The 1998 LUTE EIR found all impacts to hazardous materials handling, potential release of hazardous materials, hazardous materials related to construction and demolition, and contamination of soils or groundwater, would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found that impacts related to exposure of construction workers to hazardous materials would be less than significant with implementation of Mitigation Measure M.5, which requires the preparation and implementation of site-specific

health and safety plans as recommended by the Occupational Safety and Health Administration. Mitigation Measure M.5 is functionally equivalent to current SCAs which reduce potential hazardous materials impacts to less-than-significant levels.

2. Project Analysis

Hazardous Materials Use, Storage and Disposal (Criteria 8.a, 8.b, and 8.c)

Operation of the project would not involve the use, storage, or disposal of significant quantities of hazardous materials. The proposed retail and residential uses would involve the use of only small quantities of commercially available hazardous materials (e.g., paint and cleaning supplies).

Construction of the project would involve demolition of the existing asphalt pavement, parking attendant booth, and lighting infrastructure on the project site. There is the possibility of hazardous building materials being present on the project site including the potential for asbestos containing materials (ACMs) and lead paint to be present in the parking attendant booth, the potential for lead to be present in asphalt striping paint and asbestos to be present in asphalt, and the potential for polychlorinated biphenyls (PCBs) to be present in lighting ballasts. If present and not appropriately removed and disposed of, hazardous building materials could be released into the environment during demolition activities, which may adversely affect construction workers, the public, and/or the environment.

In accordance with the requirements of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43), the project applicant must submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of ACMs, lead-based paint, PCBs, and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant must submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant must implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.

As described in the 2011 Renewal Plan EIR, California Health and Safety Code Section 19827.5 allows local agencies to issue demolition or alteration permits only after the applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants including asbestos. The project would be required to comply with SCA-AIR-3: Asbestos in Structures (#26), which requires the project applicant to comply with all applicable laws and regulations regarding demolition and renovation of ACMs, including but not limited to California Code of Regulations Title 8; California Business and Professions Code

Division 3; California Health and Safety Code Sections 25915-25919.7; and BAAQMD Regulation 11, Rule 2, as may be amended. Evidence of compliance must be submitted to the City upon request. The project would also be required to comply with SCA-HAZ-2: Hazardous Materials Related to Construction (#42), which requires implementation of lead-safe work practices and compliance with all local, regional, state, and federal requirements concerning lead.

In addition, consistent with the findings of the Program EIRs, the project would be required to properly handle and dispose of electrical equipment, lighting ballasts and other building materials that may be identified to contain PCBs in accordance with the Toxic Substances Control Act and other federal and State regulations.

Construction of the project would involve the use and transport of hazardous materials. These materials could include fuels, oils, paints, and other chemicals used during construction activities. Handling and transportation of hazardous materials could result in accidental releases or spills and associated health risks to workers, the public, and environment. The project would be required to comply with SCA-HAZ-2: Hazardous Materials Related to Construction (#42), which requires that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health which could occur as a result of hazardous materials handling and storage.

The transportation of hazardous materials is subject to United States Department of Transportation (DOT), Resource Conservation and Recovery Act (RCRA), and state regulations. In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The USDOT developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The California Highway Patrol, the California Department of Transportation (Caltrans), and the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the spill cleanup. Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that may be classified as hazardous waste. Hazardous wastes would be required to be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by DOT, RCRA, and state regulations.

Compliance with SCA-HAZ-2: Hazardous Materials Related to Construction (#42) and existing regulations as described above would minimize the potential for accidental releases of hazardous

materials used during construction and ensure that potential impacts of the project associated with routine transport, use, disposal of hazardous materials would be less than significant.

Exposure to Hazardous Materials in the Subsurface, Cortese List (Criteria 8.a and 8.d)

The project site is not included on any of the lists of hazardous materials release sites compiled in accordance with Government Code Section 65962.5, also known as the "Cortese List."[93]

A Phase I Environmental Site Assessment (ESA)[94] was prepared for the project site in 2019, which indicated that historical uses of the project site included residential homes in the late 1800's to early 1900's, a theater and small commercial tenant spaces between 1911 and 1960, and a parking lot between 1960 and the present. The Phase I ESA found no environmental concerns at the project site and indicated that there is no available information to suggest that the project site has been adversely impacted by historic uses. The Phase I ESA also indicated that any residual subsurface impacts from potential lead-containing paint on the exterior of the building should be considered *de minimis*.[95]

The project would be required to comply with SCA-HAZ-2: Hazardous Materials Related to Construction (#42), which requires that if soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant must cease work in the vicinity of the suspect material, the area must be secured as necessary, and the applicant must take all appropriate measures to protect human health and the environment. Appropriate measures would include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work would not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate. Compliance with SCA-HAZ-2 would ensure that unexpected contamination would be dealt with during construction in a manner that would be protective of human health and the environment.

Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43) would replace the requirement for implementation of 1998 LUTE EIR Mitigation Measure M.5,

[93] California Environmental Protection Agency (Cal/EPA). 2020. Cortese List Data Resources. Available at: https://calepa.ca.gov/sitecleanup/corteselist/, accessed August 28, 2020.

[94] PII Environmental, 2019. Phase I Environmental Site Assessment (ESA) Report, 1431 Franklin Street, Oakland, California, August 5.

[95] The American Society for Testing and Materials (ASTM) E 1527-13 Standard for Phase I ESAs defines *de minimis* conditions as conditions which generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

and would require the project applicant to submit a Health and Safety Plan for the review and approval by the City and implement the approved plan to protect project construction workers from risks associated with hazardous materials and ensure that BMPs are implemented by the contractor during construction to minimize potential hazards related to contaminated soil and groundwater, if encountered.

Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43) and SCA-HAZ-2: Hazardous Materials Related to Construction (#42) would ensure that potential impacts from the project related to potential hazardous materials in the subsurface of the project site would be less than significant.

Hazardous Materials within 0.25-Mile of a School (Criterion 8.e)

Envision Academy for Arts & Technology, a public middle and high school, is located approximately 300 feet northeast of the project site at 1515 Webster Street. Oakland School for the Arts, a public middle school and high school, is located approximately 1,200 feet north-northwest of the project site at 530 18th Street.[96] Starlite School, a private kindergarten, is located approximately 1,200 feet southeast of the project site at 246 14th Street. No other schools were identified within a 0.25-mile of the project site. The project would not involve the handling of acutely hazardous materials. Consistent with the findings of the 2011 Renewal Plan EIR, compliance with SCAs described above that address potential emissions of hazardous materials during construction would reduce potential impacts from the project related to hazardous emissions or the handling of hazardous materials, substances, or waste within 0.25-mile of a school to a less-than-significant level.

Emergency Access Routes (Criteria 8.f and 8.g)

The project would not permanently alter any existing streets. During construction, the project may require temporary closure of a portion of Franklin Street. The Safety Element of the City of Oakland General Plan[97] indicates that the emergency evacuation routes in the vicinity of the project site include Telegraph Avenue, Broadway, Harrison Street, and 14th Street. Construction of the project would not impact these nearby designated evacuation routes. Consistent with the findings of the 2011 Renewal Plan EIR, compliance with traffic control requirements imposed by the City for the permitting of temporary closure of street areas would ensure that appropriate emergency access is maintained at all times during construction activities. Therefore, the project would have a less than significant impact related to emergency access and evacuation.

[96] California Department of Education, 2020. California School Directory. Available at: https://www.cde.ca.gov/schooldirectory/, accessed August 28.

[97] City of Oakland, 2004. General Plan, Safety Element, Figure 7.2. Amended 2012. Available at: http://www2.oaklandnet.com/government/o/PBN/OurServices/GeneralPlan/DOWD009020, accessed March 5, 2020.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to hazards and hazardous materials than those identified in the Program EIRs. Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43), SCA-HAZ-2: Hazardous Materials Related to Construction (#42), and SCA-AIR-3: Asbestos in Structures (#26) would ensure that potential impacts related to hazards and hazardous materials would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

I. HYDROLOGY AND WATER QUALITY

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Violate any water quality standards or waste discharge requirements;	☒	☐	☐
b. Result in substantial erosion or siltation on- or off site that would affect the quality of receiving waters;	☒	☐	☐
c. Create or contribute substantial runoff which would be an additional source of polluted runoff;	☒	☐	☐
d. Otherwise substantially degrade water quality;	☒	☐	☐
e. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources;	☒	☐	☐
f. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);	☒	☐	☐
g. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;	☒	☐	☐
h. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river, or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site;	☒	☐	☐
i. Result in substantial flooding on- or off-site;	☒	☐	☐
j. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;	☒	☐	☐
k. Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or	☒	☐	☐
l. Expose people or structures to a substantial risk of loss, injury, or death involving flooding.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR found all impacts related to hydrology and water quality to be less than significant with implementation of applicable SCAs.

The 1998 LUTE EIR and 2010 Housing Element Update EIR found all hydrology and water quality impacts to be less than significant and therefore no mitigation measures or SCAs were required.

2. Project Analysis

Water Quality and Creek Protection (Criteria 9.a, 9.b, 9.c, 9.d, and 9.e)

The project is located within a highly urbanized environment and there are no lakes, creeks, or other surface waters in the vicinity of the project. Lake Merritt, which is the nearest surface water body, is approximately 2,500 feet to the east and is separated from the project site by urban development. Stormwater runoff from the project site is conveyed to Lake Merritt via underground storm drains and culverts.

Construction of the project would involve demolition, grading, and construction, all of which could, if not properly managed, result in degradation of the quality of stormwater runoff, erosion and/or sedimentation, and adverse effects on downstream receiving waters. The proposed project would require a grading permit and therefore would be required to comply with SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48) which requires preparation and implementation of an Erosion and Sedimentation Control Plan to manage stormwater runoff and minimize erosion and sedimentation through measures such as barriers and devices to trap, store, and filter runoff.

As discussed under *Section V.H, Hazards and Hazardous Materials*, the project would be required to comply with SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43) and SCA-HAZ-2: Hazardous Materials Related to Construction (#42) which require Best Management Practices (BMPs) to be implemented during construction to minimize potential negative effects on groundwater and receiving waters which could result from inappropriate handling of construction-related hazardous materials (e.g., fuels, oils, and paints) and potentially contaminated soil and groundwater during construction.

As indicated in the Preliminary Geotechnical Consultation[98] prepared for the project, the anticipated high groundwater level in the area of the project site is 20 feet below ground surface. Based on the depth to groundwater, dewatering is not anticipated to be required during project construction. However, if dewatering is required during construction, the dewatering would be subject to permits from East Bay Municipal Utility District (EBMUD) or the Regional Water Quality Control Board (RWQCB), depending on if the discharge were to the sanitary or storm sewer system, respectively. If the water is not suitable for discharge to the storm drain (receiving water), dewatering effluent may be discharged to EBMUD's sanitary sewer system if special discharge criteria are met. These include, but are not limited to, application of treatment technologies or BMPs which would result in achieving compliance with the wastewater discharge

[98] Langan, 2020, op. cit.

water quality limits. Discharges to EBMUD's facilities must occur under a Special Discharge Permit. In addition, per the EBMUD Wastewater Ordinance, "all dischargers, other than residential, whose wastewater requires special regulation or contains industrial wastes requiring source control shall secure a wastewater discharge permit" (Title IV, Section 1). EBMUD also operates its wastewater treatment facilities in accordance with Waste Discharge Requirements issued by the RWQCB, which require rigorous monitoring of effluent to ensure discharges do not adversely impact receiving water quality.

Because the project would involve replacement of over 10,000 square feet of impervious surfaces, the project would be required to comply with Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP).[99] Regulated projects are required to incorporate post-construction stormwater management measures to reduce stormwater pollution from all new and replaced impervious surfaces. The project is a Category "C" Special Project which is qualified for 100 percent Low Impact Development (LID) treatment reduction credits based on the location of the project site, the density achieved by the project (expressed as floor area ratio and dwelling units per acre), and the lack of surface parking. This means up to 100 percent of the amount of runoff for the project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems: (1) tree-box-type high flowrate biofilters and (2) vault-based high flowrate media filters.

The project would be required to comply with SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#53), which requires compliance with provision C.3 of the MRP, and the preparation and implementation of a Post-Construction Stormwater Management Plan, which would include and identify stormwater control and treatment systems. Compliance with SCA-HYD-2 also requires the project applicant to enter into a maintenance agreement with the City, to ensure adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures.

Use of Groundwater (Criterion 9.f)

As discussed above, dewatering is not anticipated to be required during project construction. However, if dewatering is required during construction, it would be temporary and have only a localized and short-term effect on groundwater levels. Therefore, depletion of groundwater resources associated with construction-period dewatering would be less than significant. Operation of the project would not involve dewatering or the use of groundwater, as potable water is supplied to the project site by EBMUD.

[99] San Francisco Bay Regional Water Quality Control Board (RWQCB), 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, November 19.

Stormwater Drainage and Drainage Patterns (Criteria 9.g and 9.h)

The project site is currently entirely covered with impervious surfaces, totaling approximately 0.48 acres. No increase in impervious surfaces would be occur under the project. As described above, stormwater runoff from the project site is currently conveyed to Lake Merritt via underground storm drains and culverts. Stormwater would continue to be conveyed through these same storm drains and culverts as part of the project. Therefore, the project would not increase runoff that could exceed the capacity of existing storm water drainage systems and would not substantially alter the existing drainage pattern of the site or increase the risk of flooding, erosion or sedimentation.

Flooding and Substantial Risks from Flooding (Criteria 9.i, 9.j, 9.k, and 9.l)

Current floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) indicates that the project site is located outside the 100-year and 500-year flood hazard areas.[100] Therefore, development of the project would not be subject to significant impacts with respect to storm-related flooding.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related water quality and creek protection, use of groundwater, stormwater drainage, or flooding than those identified in the Program EIRs. Implementation of SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43), SCA-HAZ-2: Hazardous Materials Related to Construction (#42), SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48), and SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#53), would ensure impacts to hydrology and water quality would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

[100] Federal Emergency Management Agency (FEMA), 2018. Flood Insurance Rate Map, Alameda County, California and Incorporated Areas, Panel 67 of 725, Map Number 06001C0067H, December 21.

J. LAND USE, PLANS, AND POLICIES

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Physically divide an established community;	☒	☐	☐
b. Result in a fundamental conflict between adjacent or nearby land uses; or	☒	☐	☐
c. Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR found all land use or policy impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR analyzed land use compatibility between existing uses and zoning and found that these impacts to be less than significant with implementation of a number of mitigation measures, which have largely been implemented into the City of Oakland Municipal Code (OMC) or as SCAs. The 1998 LUTE EIR also found a significant and unavoidable effect associated with policy inconsistencies with the Clean Air Plan (resulting from significant and unavoidable increases in criteria pollutants from increased traffic regionally). It identified mitigation measures, which largely align with current City of Oakland SCAs involving TDM and which apply to all projects within the City of Oakland.

2. Project Analysis

Division of Existing Community, Conflict with Land Uses, or Land Use Plans (Criteria 10.a through 10.c)

General Plan and Zoning Designation

The City of Oakland General Plan Land Use and Transportation Element (LUTE) designates the project site as Central Business District (CBD) which is intended to encourage, support, and enhance the downtown area as a high-density, mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail,

entertainment, and transportation. The project site is within the Central Business District Pedestrian Retail Zone (CBD-P). The CBD-P zone is intended to enhance the Central Business District through ground-floor pedestrian-oriented, active storefront uses and upper story spaces are intended to be available for a wide range of office and residential activities.

The project is consistent with both the intent of the General Plan and Zoning as it would develop a high-rise residential tower that would help the City further establish the area as a high-density, mixed-use urban center of regional importance. Additionally given the size of the building and the approximately 991 residents that will occupy the 40 floors of residential space, regular pedestrian activity in and out of the building is anticipated.[101] With the proximity of retail, many restaurants, and plazas in the area, the building occupants are anticipated to substantially increase pedestrian activity and help support pedestrian-oriented ground-floor uses in the project site's vicinity.

Development Standards

The project site is within Height Area 7, which has no maximum tower height limit. However, towers above 250 feet in height require a Conditional Use Permit. In Height Area 7, the maximum building base height is 85 feet and the minimum principal building height is 45 feet. The project would result in the development of a 399.5-foot-high, 40-story building with a base height of 60 feet, placing the project within the development envelope permitted in Height Area 7.

Within Height Area 7, the maximum non-residential FAR is 20.0. Based on the maximum FAR, up to 419,480 square feet of uses are allowed on the 20,974 square-foot project site. The project would consist of 401,828 square feet of floor area, and thus would have a non-residential FAR of 19.16.[102]

The project size is also zoned for a maximum residential density of 90 square feet of lot area per residential unit and 45 square feet of lot area per efficiency unit (which is defined by the OMC as "dwelling unit containing only a single habitable room other than a kitchen and containing a total floor area of four hundred (400) square feet or less"). The applicant is proposing 42 efficiency units, which reduces the square footage allocated to residential units to 19,084 square feet, or an allowance of 212 residential units. The maximum unit count is therefore 42 efficiency units and 212 residential units, for a total of 254 base dwelling units. However, as discussed in *Chapter II, Project Description,* the project sponsor is proposing to set aside 15 percent of the base project units for very-low-income households for a 50 percent density bonus above the maximum allowable residential density. With the addition of a 50 percent density bonus to the 254 base dwelling units, the project is entitled to a maximum of 381 units, and thus the proposed 381 units

[101] Based on 2.6 persons per household in Oakland as estimated by United States Census.

[102] Non-residential FAR calculations include square footage totals from residential, lobby uses, and applicable support spaces based on Oakland Municipal Code 17.09.4040.

would not exceed the CBD-P zoning density standards.[103] The project sponsor does not require use of any development standards incentives or concessions it would normally be entitled to for use of the state density bonus.

Division of Existing Communities

Consistent with the findings of the Program EIRs, the project would increase residential space in the Downtown Oakland area, specifically within the CBD. Furthermore, the project's land uses are consistent and compatible with nearby existing and planned commercial, office, and residential land uses. Lastly, the project would be built on land that is already developed, and thus would not create a new physical barrier. For these reasons, the project would not create a division of existing communities and would be consistent with existing uses.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to land use, plans, or policies than those identified in the Program EIRs. The Program EIRs did not identify any applicable mitigation measures related to land use, and no City SCAs have been identified for the implementation of the project.

[103] Per California Government Code 45915(f)(5), all density calculations resulting in fractional units shall be rounded up to the next whole number.

K. NOISE

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts. During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard;	☒	☐	☐
b. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020) regarding persistent construction-related noise;	☒	☐	☐
c. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;	☒	☐	☐
d. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3-dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project);	☒	☐	☐
e. Expose persons to interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);	☒	☐	☐
f. Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (see Figure 1);	☒	☐	☐
g. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]); or	☒	☐	☐

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
h. During either project construction or project operation expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR found that noise and vibration impacts associated with development in the project area would be less than significant with implementation of applicable SCAs, with the exception of the development of the Victory Court Ballpark, which would have significant and unavoidable impacts related to construction noise, special events operational noise, and traffic noise, even with implementation of applicable SCAs. The 2011 Renewal Plan EIR found that development facilitated by the Renewal Plan would result in construction-related activities that would temporarily increase ambient noise levels in downtown over the duration of construction. Development could expose nearby residences to noise levels as high as 89 dBA at 50 feet using typical construction methods and up to 105 dBA at 50 feet if pile driving is required. However, with implementation of applicable SCAs pertaining to noise controls, limits on days and hours for construction operation, noise complaint procedures, and measures pertaining to pile driving and other extreme noise generators, impacts from construction noise would be reduced to less than significant levels, with the exception of the Victory Court Ballpark construction. Additional vehicles traveling through the project area as a result of new development facilitated by the Renewal Plan would increase noise levels adjacent to nearby roads by less than 5 dBA and thus is classified as a less-than-significant impact.

The 2010 Housing Element Update EIR found impacts to be less than significant and no mitigation measures were required.

The 1998 LUTE EIR found that noise impacts associated with traffic noise increases, changes in map designations, mixed use development, noise compatibility within residential areas, live-work noise compatibility, and transportation improvements would be less than significant with implementation of Mitigation Measures L.3, L.4, L.5, and L.7. These mitigation measures are functionally equivalent to the updated City SCAs (#67 and #68). In addition, the 1998 LUTE EIR found that impacts related to short-term increases in noise and vibration due to construction for the Downtown Showcase District and Coliseum Showcase District would be significant and unavoidable, even with implementation of Mitigation Measures L.8 and L.11.

2. Project Analysis

Ambient Noise Environment

The primary sources of noise in the vicinity of the project site are traffic on I-980 and along major roadways near the project site. Sources of noise from major roadways include: (1) traffic on Broadway, which runs north to south 110 feet west of the project site; (2) traffic on 14th Street, which runs east to west 130 feet south of the project site; and (3) traffic on Franklin Street adjacent to the eastern border of the project site. Based on the roadway noise contours for 2025 in the City of Oakland General Plan, traffic noise levels range from 60 to 65 dBA[104] L_{dn}[105] at the project site and vicinity.[106,107]

Regulatory Background

Chapter 17.120.050 of the Municipal Code establishes performance standards to control dangerous or objectionable environmental effects of noise. The operational noise level standards for residential and commercial zones are presented in Table V.K-1. The construction and demolition noise level standards for residential, commercial, and industrial land uses are presented in Table V.K-2. Noise from mechanical heating, ventilation, and air conditioning (HVAC) systems, which are required to be housed within an enclosure if located within 200 feet of a residential zone, are prohibited from exceeding the nighttime noise levels presented in Table V.K-2. Chapter 17.120.060 of the Oakland Municipal Code prohibits activities from generating vibration that is perceptible without instruments by the average person at or beyond the lot line of the lot containing such activities. Vibration generated by motor vehicles, trains, and temporary construction or demolition work is exempt from this standard.

Chapter 8.18.010 of the Municipal Code defines nuisance noises and establishes noise enforcement procedures and penalties for excessive and annoying noise. Noise that conflicts with the performance standards established in Chapter 17.120.050 is considered a nuisance noise. Chapter 8.18.020 prohibits noises between the hours of 9:00 p.m. and 7:00 a.m. that would

[104] dBA is an A-weighted sound level. The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.

[105] L_{dn} = day/night noise level. The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10:00 p.m. and 7:00 a.m.

[106] City of Oakland, 2005. City of Oakland General Plan, Noise Element, March.

[107] The City of Oakland General Plan notes that existing traffic noise levels are not expected to change substantially over the 20-year period between 2005 and 2025 (i.e., changes in noise levels would not be distinguishable) given the minor changes expected to occur in traffic levels. Therefore, existing noise levels at the project site and in its vicinity are assumed to be the same as what is indicated in the 2025 noise contours.

TABLE V.K-1 CITY OF OAKLAND OPERATIONAL NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA

Receiving Land Use	Cumulative Number of Minutes in a 1-Hour Period	Maximum Allowable Noise Level (dBA)[a,b] Daytime 7:00 a.m.–10:00 p.m.	Maximum Allowable Noise Level (dBA)[a,b] Nighttime 10:00 p.m.–7:00 a.m.
Residential and Civic[c]	20	60	45
	10	65	50
	5	70	55
	1	75	60
	0 (L_{max}[d])	80	65
	Anytime		
Commercial	20	65	
	10	70	
	5	75	
	1	80	
	0 (L_{max}[d])	85	
Industrial	20	70	
	10	75	
	5	80	
	1	85	
	0 (L_{max}[d])	90	

[a] These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise.
[b] If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
[c] Legal residences, schools and childcare facilities, health care or nursing homes, public open space, or similarly sensitive land uses.
[d] L_{max} is the maximum instantaneous noise level.
Source: City of Oakland Municipal Code Section 17.120.050 Noise.

disturb the peace and comfort of any person. Additionally, the following construction noise control measures are required:

1. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
2. Unnecessary idling of internal combustion engines is prohibited.
3. All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

TABLE V.K-2 CITY OF OAKLAND CONSTRUCTION NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA

	Daily 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Short-Term Operations[a]		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operations[b]		
Residential	65	55
Commercial, Industrial	70	60

Notes: If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
Nighttime noise levels from construction and demolition between the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays are prohibited from exceeding the applicable nighttime operational noise level standards (see Table V.K-1).
[a] Short-term construction or demolition operation is less than 10 days.
[b] Long-term construction or demolition operation is 10 days or more.
Source: City of Oakland Municipal Code Section 17.120.050 Noise.

4. Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
5. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Temporary Construction Noise Impacts (Criteria 11.a and 11.b)

A development project would result in a significant impact if it were to generate construction noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) or City of Oakland nuisance standards (Oakland Municipal Code Section 8.18.020).

The primary noise impacts from construction of the project would occur from noise generated by the operation of construction equipment on the project site. Secondary sources of noise during construction would include increased traffic flow from the transport of workers, equipment, and materials to the project site.

Noise from Construction Equipment

Construction is expected to occur over a period of approximately 36 months and would temporarily increase noise levels in the vicinity of the project site. Construction noise levels would vary from day-to-day, depending on a number of factors, including the quantity and condition of the equipment being used, the types and duration of activity being performed, the distance between the noise source and the receptor, and the presence or absence of barriers, if any,

between the noise source and receptor. Excavation/grading and foundation work are typically the noisiest phases of construction and would occur during the first phases of construction. The later phases of construction include activities that are typically quieter and that occur within the building under construction because partially constructed building walls can substantially reduce noise levels by providing a barrier for noise between the construction activity and any nearby receptors. Auger-cast piles would be used as the foundation system for the project, which would generate noise levels similar to an auger drill rig.[108,109]

The Noise Element of the Oakland General Plan defines noise-sensitive receptors as land uses whose purpose and function can be disrupted or jeopardized by noise. Noise-sensitive receptors include residences, schools, churches, hospitals, elderly-care facilities, hotels, libraries, and certain types of passive recreational open space.[110,111] The nearest noise-sensitive receptors to the project site are: 1) apartments at 1411 Franklin Street adjacent to the project site to the south; 2) apartments at 420 14th Street adjacent to the project site to the south; 3) apartments at 415 15th Street located 45 feet north of the project site boundary; 4) apartments at 417 15th Street located 45 feet north of the project site boundary; 5) Lincoln College at 401 15th Street located 45 feet north of the project site boundary; and 6) Envision Academy for Arts & Technology at 1515 Webster Street located approximately 305 feet to the northeast of the project site.

Table V.K-3 shows typical noise levels associated with various types of construction equipment that may be used during each phase of construction.[112] As shown in Table V.K-3, construction noise would range from 69 to 82 dBA L_{eq} at 50 feet. Because the nearest noise-sensitive receptors are adjacent to the project site, construction noise levels would exceed the 65-dBA threshold at the nearest noise-sensitive receptors when heavy construction equipment is operated at or close to the project site boundary.

Implementation of the City of Oakland's SCAs would reduce the impacts of construction-period noise, as described below.

- SCA-NOI-1: Construction Days/Hours (#61) provides limits on the days and hours of construction, which specify that construction activities would be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday (among other restrictions). This SCA also requires any extension of these work hours to be approved in advance by the City and requires property owners and occupants within 300 feet of the project site to be notified of such an extension.

[108] Auger-cast piles are constructed by rotating a hollow stem continuous flight auger into the soil to a designed depth.

[109] Brandon Northart, Urban Planning Partners, Inc. E-mail correspondence with Ivy Tao, Baseline Environmental Consulting, August 4, 2020.

[110] A passive recreation area is generally an undeveloped space or environmentally sensitive area that requires minimal development.

[111] City of Oakland, 2005, op. cit.

[112] The types of construction equipment are based on the California Emissions Estimator Model (CalEEMod) equipment list.

- SCA-NOI-2: Construction Noise (#62) requires all construction projects to implement basic noise reduction measures during construction.
- SCA-NOI-3: Extreme Construction Noise (#63) requires that the project applicant prepare and implement a Construction Noise Management Plan that contains site-specific noise attenuation measures to reduce construction impacts associated with any anticipated extreme noise generating activities (i.e., activities generating noise levels greater than 90 dBA).
- SCA-NOI-4: Construction Noise Complaints (#65) provides additional measures to respond to and track construction noise complaints during construction to allow sources of potentially disruptive construction noise to be quickly controlled or eliminated.

As indicated in Table V.K-3, construction equipment could generate noise levels of up to 82 dBA L_{eq} at 50 feet. Noise levels at a known distance from point sources are increased by 6 dBA for every halving of that distance for hard surfaces.[113] Because the nearest noise-sensitive receptors are adjacent to the project site, construction noise would be above 90 dBA if heavy construction equipment is operated at the project site boundary. Because the project could generate extreme construction noise (noise levels of greater than 90 dBA), SCA-NOI-3: Extreme Construction Noise (#63) would apply. The types of measures that would effectively reduce construction noise that may be included in the Construction Noise Management Plan include the following:

- **Equipment positioning.** Construction equipment will be positioned as far away from noise-sensitive receptors as possible. For every doubling of the distance between a given receptor and construction equipment for hard surfaces, noise will be reduced by approximately 6 dBA.
- **Temporary noise barriers placed between the proposed construction activities and nearby receptors.** The noise barriers may be constructed from plywood and installed on top of a portable concrete K-Rail system to be able to move and/or adjust the wall location during construction activities. Other noise reduction materials that result in an equivalent or greater noise reduction than plywood may also be used. Noise control blankets may be utilized on the building structure or hung on scaffolding as the building is erected to reduce noise emissions from construction activities. The use of noise control blankets will particularly be targeted to cover the levels of the building that have line of sight with the windows of nearby receptors. The composition, location, height, and width of the barriers during different phases of construction will be determined by a qualified acoustical consultant and incorporated into the Construction Noise Management Plan for the project. A properly designed noise barrier can reduce noise on the order of 5 dBA at some distance from the noise source or receptor, and up to 10 dBA or more if it is placed in close proximity to the receptor or the noise source.

[113] California Department of Transportation (Caltrans), 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol, September.

TABLE V.K-3 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (DBA L_{EQ})

Phase	Equipment[a]	Reference Noise Levels at 50 Feet
Site Preparation	Rubber Tired Dozers	81
	Tractors/Loaders/Backhoes	80
Grading	Bore/Drill Rigs	78
	Excavators	81
	Graders	81
	Rubber Tired Dozers	81
	Tractors/Loaders/Backhoes	80
Building Construction	Cranes	77
	Forklifts	NA
	Generator Sets	79
	Tractors/Loaders/Backhoes	80
	Welders	69
Paving	Cement and Mortar Mixers	81
	Pavers	82
	Paving Equipment	82
	Tractors/Loaders/Backhoes	80
	Rollers	78
Architectural Coating	Air Compressors	76

Notes: NA – Not available. Construction noise levels for forklifts are not available.
[a] The types of construction equipment are based on the California Emissions Estimator Model (CalEEMod) equipment list.
Source: U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook (for construction equipment noise levels shown above).

- **Best available noise control techniques.** Best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) will be used for project equipment and trucks during construction wherever feasible. For example, exhaust mufflers on pneumatic tools can lower noise levels by up to 10 dBA and external jackets can lower noise levels by up to 5 dBA.
- **Monitoring.** Monitoring the effectiveness of noise attenuation measures by taking noise measurements will ensure that the best practices being implemented are effective at reducing noise levels to acceptable levels.
- **Notification and communication.** Notification and open lines of communication with potentially affected nearby receptors is an effective way to manage construction-period

noise. When property owners and occupants feel informed about a project's daily schedule and duration, they are typically better able to accept potential noise-related inconvenience. All receptors located within 300 feet of the construction activities will be notified and informed about the project prior to commencing extreme noise generating activities.

The combination of temporary noise barriers and exhaust mufflers could provide noise reduction of up to 25 dBA. Additionally, a typical building facade with windows closed provides a noise level reduction of approximately 25 dBA.[114] Therefore, interior noise levels at nearby receptors would be substantially lower than exterior noise levels.

Please note that once the external structure of a building has been erected, the noisiest phases of construction would be complete, and noise from construction equipment inside of the structure would be blocked and attenuated by the structure itself. In addition, the proximity of the project site to noise-sensitive receptors, and the types of construction equipment that would be used as part of the project, are similar to other projects in Downtown Oakland and other urban areas. Because the project site and its vicinity are part of an established, urbanized area, periodic exposure to construction-related noise and vibration are a common part of the existing environment.

The 2011 Renewal Plan EIR considered construction noise (including pile driving) impacts on noise-sensitive receptors (page 4.10-17). The 2011 Renewal Plan EIR indicates that construction activities could generate noise levels of up to 105 dBA L_{eq} at 50 feet. The 2011 Renewal Plan EIR found the construction noise impacts to be less than significant with implementation of applicable SCAs (equivalent to SCA-NOI-1, SCA-NOI-2, and SCA-NOI-3, and SCA-NOI-4) because they would reduce construction noise impacts to the degree feasible. The proposed project would not involve pile driving and construction noise would range from 69 to 82 dBA L_{eq} at 50 feet (as shown in Table V.K-3), which is lower than what was analyzed in the 2011 Renewal Plan EIR. Although construction-generated noise could temporarily result in the exposure of the nearest noise-sensitive receptors to noise levels in excess of the Noise Ordinance Standards, consistent with the findings of the 2011 Renewal Plan EIR, implementation of the City of Oakland's SCAs would reduce the impacts of construction-period noise to the degree feasible, and therefore noise impacts related to construction are considered less than significant.

Noise from Increased Traffic Flow

During construction, secondary sources of noise would include increased traffic flow from the transport of workers, equipment, and materials to the project site. As a worst-case assumption, construction of the project could generate up to 375 truck trips during site preparation. These truck trips could generate noise levels of up to approximately 56.7 dBA L_{eq} during site preparation

[114] Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment.

over a period of about 2 weeks.[115] As discussed above, the ambient noise levels at the project site range from approximately 60 to 65 dBA L_{dn}. Based on the additive properties of noise, the increased truck trips during site preparation could increase ambient noise along local area roadways by up to 1.7 dBA. Because an increase of 3.0 dBA is considered a "just-perceivable" increase, the addition of project-related truck trips would not generate a perceivable increase in noise levels. Therefore, increased vehicle and hauling truck trips along local roadways during construction would not be a significant source of construction-generated noise and the impact would be less than significant.

Operational Noise (Criterion 11.c)

A development project would result in a significant impact if it were to generate operation-period noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050).

The primary noise generated by the long-term operation of the project would occur as a result of the use of HVAC systems. Noise generated from HVAC systems would be subject to SCA-NOI-5: Operational Noise (#67) that requires all operational noise to comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. Therefore, noise generated by the HVAC systems would not violate the City of Oakland operational noise standards during the operational period of the project, and the potential for noise impacts during operation would be less than significant.

Permanent Increase in Ambient Traffic Noise and Cumulative Noise Impact (Criterion 1.d)

A development project would generate a significant increase in ambient traffic noise if it results in a 5-dBA permanent increase in noise levels in the project vicinity. A project is considered to contribute to a significant cumulative impact if (1) the cumulative increase results in a 5-dBA permanent increase in ambient noise levels in the project vicinity, and (2) 3 dBA of the cumulative increase is attributable to the project.

Traffic Noise Analysis

The assessment of AM and PM peak hour traffic volumes at two intersections near the project site indicates that the highest traffic volume increase of 19 percent would occur along 15th Street between Broadway and Franklin Street (from 85 trips to 101 trips per hour during the AM peak hour).[116] The estimated existing and existing plus project traffic noise levels for this roadway

[115] Numbers of truck trips and duration are based on the California Emissions Model (CalEEMod) (see Attachment F). Traffic noise model outputs are included in Attachment G. FHWA TNM Version 2.5 model was used for these results.

[116] Attachment I.

segment are summarized in Table V.K-4 below. Based on these estimates, the proposed project would increase traffic noise by about 0.7 dBA along this roadway segment. As this segment would have the greatest predicted increase in project-related traffic, noise increases along other roadway segments affected by the project would be less than 0.7 dBA. This is below the 5-dBA significance threshold for project-generated traffic noise. As a result, the implementation of the project would not result in a significant increase in traffic noise along local area roadways.

TABLE V.K-4 EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS FOR THE ROADWAY SEGMENT WITH HIGHEST INCREASE, DBA L_{EQ} AT 50 FEET?

Roadway Segment	Existing Traffic Noise Levels[a]	Existing + Project Traffic Noise Levels[a]	Estimated Increase in Noise[b]
15th Street between Broadway and Franklin Street (AM peak hour)	53.3	54.0	0.7

[a] Noise levels were determined using FHWA TNM Version 2.5 model. Traffic noise model outputs are included in Attachment I. Road center to receptor distance is approximately 50 feet. The analysis assumed 95 percent automobile, 4 percent medium trucks, and 1 percent heavy truck under the existing condition and the existing project condition for this roadway segment. Traffic speeds were set at 30 mph.
[b] Considered significant if the incremental increase in noise from traffic is greater than the existing noise level by 5 dBA L_{eq}.
Source: Fehr & Peers, 2020.

Under cumulative conditions, which considers traffic generated by past, present, and probable future projects, including the proposed project, the assessment of AM and PM peak hour traffic volumes at two intersections near the project site indicates that the most impacted location (the one with the highest traffic noise increase) would occur along 15th Street between Broadway and Franklin Street (from 90 trips to 126 trips per hour during the PM peak hour). The estimated existing and cumulative plus project traffic noise levels for this roadway segment are summarized in Table V.K-5 below. Based on these estimates, the cumulative projects, including the project, would increase traffic noise by about 1.1 dBA along this roadway segment. As this segment would have the greatest predicted increase in traffic, noise increases along other roadway segments affected by the cumulative projects, including the project, would be less than 1.1 dBA. This is below the 5.0 dBA significance threshold for cumulative traffic noise. As a result, the cumulative traffic noise impact would be less than significant.

Noise Exposure during Construction and Operation (Criteria 11.e, 11.f, and 11.g)

A development project would result in a significant impact to construction workers if it were to generate noise in excess of California Division of Occupational Safety and Health (Cal/OSHA) standards. Construction workers could be exposed to excessive noise from the heavy equipment used during construction of the project as shown in Table V.K-3. However, noise exposure of

TABLE V.K-5 MODELED PEAK HOUR TRAFFIC NOISE LEVELS FOR THE MOST IMPACTED LOCATION UNDER CUMULATIVE SCENARIO, DBA L_{EQ} AT 50 FEET

Roadway Segment	Existing Traffic Noise Levels[a]	Cumulative Plus Project Traffic Noise Levels[a]	Difference Between Cumulative Plus Project and Existing[b]
15th Street between Broadway and Franklin Street (PM peak hour)	53.7	54.8	1.1

[a] Noise levels were determined using FHWA TNM Version 2.5 model. Traffic noise model outputs are included in Attachment I. Road center to receptor distance is approximately 50 feet. The analysis assumed 95% automobile, 4% medium trucks, and 1% heavy truck under the existing condition and the existing project condition for this roadway segment. Traffic speeds were set at 30 mph.
[b] Considered significant if the incremental increase in noise from traffic is greater than the existing noise level by 5 dBA L_{eq}.
Source: Fehr & Peers, 2020.

construction workers is regulated by Cal/OSHA. Title 8, Subchapter 7, Group 15, Article 105 of the California Code of Regulations (Control of Noise Exposure) sets noise exposure limits for workers and requires employers who have workers that may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing protectors available, and keep records of employee noise exposure measurements. The construction contractor for the project would be subject to these regulations, and compliance with these Cal/OSHA regulations will ensure that the potential of construction workers to be exposed to excessive noise is less than significant.

A development project would result in a significant impact to occupants of the proposed building if it were to expose those occupants to noise levels greater than those stated in the Oakland General Plan. Occupants of the project would be subject to ambient outdoor noise levels that range from 60 to 65 dBA L_{dn}.[117] This noise environment is regarded as "conditionally acceptable" community noise exposure levels for residential land uses. The City of Oakland General Plan indicates that development within a "conditionally acceptable" environment requires an analysis of noise-reduction requirements, and if necessary, noise-mitigation features in the design.

The implementation of SCA-NOI-6: Exposure to Community Noise (#66) would require compliance with the City of Oakland General Plan. This SCA requires noise reduction measures be incorporated into building design based upon the recommendations of a qualified acoustical engineer. The noise reduction measures would be required to reduce interior noise levels to 45 dBA L_{dn} for any habitable room (e.g., within residential homes used for living, sleeping, eating, or cooking),[118] in accordance with the 2019 California Building Standards Code. Sound Transmission

[117] City of Oakland, 2005, op. cit.
[118] Habitable space is a space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

Class (STC) rated windows, exterior doors (such as balcony doors), and exterior walls are commonly used to control interior noise from exterior sources. An STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide.[119] Given that the ambient noise environment at the project site currently ranges from about 60 to 65 dBA L_{dn}, the use of sound-rated windows, exterior doors, and exterior walls with STC ratings ranging from about STC 15 to about STC 20 would need to be used in order to reduce interior noise levels from exterior sources to 45 dBA L_{dn} , thereby satisfying the interior noise standards for residential spaces. The noise control measures are required to be submitted to the City of Oakland for review and approval prior to the issuance of a construction-related permit. Compliance with SCA-NOI-6: Exposure to Community Noise (#66) would therefore reduce the potential impact that future occupants of the project would be exposed to excessive or incompatible noise levels to a less-than-significant level.

Construction and Operational Vibration (Criterion 11.h)

A development project would result in a significant impact if it were to expose persons to or generate ground-borne vibration that exceeds the criteria established by the Federal Transit Administration (FTA).

Nearby vibration-sensitive receptors include residences and buildings where people normally sleep, or institutional land uses with primarily daytime use because vibration may result in disturbance to these land uses. The nearest residential and institutional land uses are shown in Table V.K-6. In certain situations, extreme vibration can cause minor cosmetic or substantial building damage (particularly if older historic structures are located nearby). Historic buildings tend to be more susceptible to vibration (due to age and use of older construction techniques), depending on the condition of the buildings. The historic buildings and other buildings that are sufficiently close to the project site such that they may potentially be affected during project construction are also shown in Table V.K-6.

Tables V.K-7 and V.K-9 summarize the vibration criteria to prevent disturbance of occupants and to prevent damage to structures, respectively. In this analysis, the "Occasional Events" disturbance criterion is applied because the same kind of vibration events are not expected to occur over 70 times per day due to the variance in the types and locations of construction equipment used during construction. The 75-RMS VdB Occasional Events threshold for residences and buildings where people normally sleep is applied to the nearest apartment buildings, while the 78-RMS VdB Occasional Events threshold for institutional land uses with primarily daytime use is applied to Lincoln College and Envision Academy for Arts & Technology.

[119] U.S. Department of Housing and Urban Development (HUD), undated. Noise Notebook, Chapter 4 Supplement, Sound Transmission Class Guidance.

TABLE V.K-6 DISTANCES TO THE NEAREST VIBRATION-SENSITIVE RECEPTORS

Address	Approximate Distance to the Project Site and Location	Residential or Institutional Land Use	Historic Building (Y/N)
1411 Franklin Street	Adjacent	Residential	N
420 14th Street	Adjacent	Residential	N
415 15th Street	45 feet to the north	Residential	N
417 15th Street	45 feet to the north	Residential	Y
401 15th Street	45 feet to the north	Institutional	Y
1515 Webster Street	305 feet to the northeast	Institutional	Y
436 14th Street	Adjacent	NA	Y
1440 Broadway	Adjacent	NA	Y
449 15th Street	Adjacent	NA	Y
425 15th Street	Adjacent	NA	Y
421 15th Street	Adjacent	NA	Y
1441 Franklin Street	Adjacent	NA	Y
405 15th Street	45 feet to the north	NA	Y
401 15th Street	45 feet to the north	NA	Y
411 15th Street	45 feet to the north	NA	N

Notes: NA- Not applicable. Land uses are not residential or institutional.

1. Land use information is based on the review of Oakland's Planning and Zoning Map. Available at: http://oakgis.maps.arcgis.com/apps/webappviewer/index.html?id=3676148ea4924fc7b75e7350903c7224, accessed August 28, 2020.

2. Information related to historic resources was provided by UPP.

Sources: Baseline Environmental Consulting, 2020 and Urban Planning Partners Inc., 2020.

TABLE V.K-7 VIBRATION CRITERIA TO PREVENT DISTURBANCE – RMS (VDB)

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Buildings where vibration would interfere with interior operations	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83

[a] More than 70 vibration events of the same kind per day or vibration generated by a long freight train.

[b] Between 30 and 70 vibration events of the same kind per day.

[c] Fewer than 30 vibration events of the same kind per day.

Source: FTA, 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No.0123, September.

TABLE V.K-8 VIBRATION CRITERIA TO PREVENT DAMAGE TO STRUCTURES

Building Category	PPV (in/sec)	RMS (VdB)
Reinforced concrete, steel, or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA, 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No.0123, September.

The vibration criterion for "buildings extremely susceptible to vibration damage" is selected to conservatively represent the building category for the historic buildings near the project site while the criterion for "engineered concrete and masonry (no plaster)" is selected to conservatively represent the building category for other buildings near the project site.

Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and soil conditions. FTA recommends assessing disturbance and damage potential for each piece of equipment individually.[120] The reference vibration levels at 25 feet away from the construction equipment that could be used at the project site are summarized in Table V.K-9. Although the table provides one vibration level for each piece of equipment, it should be noted that there is considerable variation in reported ground vibration levels from construction activities, primarily due to variation in soil characteristics. Table V.K-9 also shows the buffer distance that would be required to reduce vibration levels to below the FTA thresholds for disturbance and building damage.

Vibration Disturbance

According to the buffer distances calculated in Table V.K-9, Envision Academy for Arts & Technology is located beyond the buffer distance of 85 feet for a vibratory roller and would not exceed the 78-VdB threshold for institutional land uses. However, Lincoln College is located within the buffer distance of 85 feet and the nearest residential receptors are located within the buffer distance of 107 feet. Therefore, construction vibration levels would exceed the 78-VdB threshold at Lincoln College and the 75-VdB threshold at the nearest residential receptors.

The degree to which a person is annoyed by vibration depends on the activity in which they are participating at the time of the disturbance. Vibration would be most annoying when it results in sleep disturbance. Lincoln College contains classrooms and offices where sleep disturbance would not occur. In addition, the exposure of Lincoln College uses in excess of the disturbance thresholds during construction would be limited in duration because the location of construction

[120] Federal Transit Administration (FTA), 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No.0123, September.

TABLE V.K-9 REFERENCE SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT AND THE ASSOCIATED BUFFER DISTANCES REQUIRED TO PREVENT EXCEEDANCE OF FTA THRESHOLDS

	At 25 Feet		Required Buffer Distance from Source			
Equipment	PPV (in/sec)	RMS (VdB)	Building Damage Threshold 0.12 PPV (Feet)	Building Damage Threshold 0.3 PPV (Feet)	Human Annoyance Threshold 75 VdB (Residences) (Feet)	Disturbance to Institutional Land Uses Threshold 78 VdB (School) (Feet)
Vibratory roller	0.210	94	36	20	107	85
Large bulldozer	0.089	87	20	11	63	50
Loaded truck	0.076	86	18	10	58	46
Small bulldozer	0.003	58	2	1	7	5

Notes:
PPV Peak Particle Velocity. The maximum instantaneous peak of a vibration signal.
RMS Root Mean Square. The average of the squared amplitude of a vibration signal.
Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate buffer distance required to reduce vibration levels at a receptor to 0.12 in/sec PPV and 0.3 in/sec PPV:
$PPV2 = PPV1 \times (D1/D2)^{1.5}$
Where: PPV1 is the reference vibration level at a specified distance.
PPV2 is the calculated vibration level.
D1 is the reference distance (in this case 25 feet).
D2 is the distance from the equipment to the receiver.
Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate buffer distance required to reduce vibration levels at a receptor 75 VdB (residential receptor) and 78 VdB (school receptor):
$RMS2 = RMS1 - 30 \log_{10} (D2/D1)$
Where: RMS1is the reference vibration level at a specified distance.
RMS2 is the calculated vibration level.
D1 is the reference distance (in this case 25 feet).
D2 is the distance from the equipment to the receiver.
Source: FTA, 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No.0123, September.

equipment would vary throughout the day depending on the location where the vibration-generating equipment is being used and would also vary over the 36-month period of construction of the project. For these reasons, vibration impacts on Lincoln College would be limited in duration and extent and would be less than significant.

Implementation of the City of Oakland's SCA-NOI-1: Construction Days/Hours (#61) would reduce the impacts of construction-period vibration on the nearest residential receptors. SCA-NOI-1 limits construction activities to the hours between 7:00 a.m. and 7:00 p.m. Monday through Friday, and limits construction with the potential to generate extreme noise (which is generally correlated with the potential to generate high vibration) to the hours between 8:00 a.m. and 4:00 p.m. Therefore, severe vibration would be restricted to normal daytime hours, thereby reducing the likelihood of disturbing residents (i.e., through interfering with sleep). Similarly, as discussed above, the location of construction equipment would vary throughout the day and over

the 36-month period of construction of the project. As a result, the potential for construction generated vibration to disturb occupants of adjacent residential buildings is less than significant.

Vibration Damage

According to the buffer distances calculated in Table V.K-9, a vibratory roller would have the potential to generate vibration levels in excess of the 0.12-in/sec PPV threshold for historic resources located within 36 feet and 0.3-in/sec PPV threshold for other buildings located within 20 feet. Based on the distances in Table V.K-6, potential damage could occur at the following buildings:

- Historic buildings:436 14th Street; 1440 Broadway; 449 15th Street; 425 15th Street; 421 15th Street; 1441 Franklin Street; 405 15th Street; 401 15th Street.
- Other buildings:1411 Franklin Street, 420 14th Street.

Construction of the project would be subject to SCA-NOI-7: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#69). SCA-NOI-7 requires design means and methods of construction to be included in a Vibration Analysis that shall be utilized in order to reduce the potential to exceed the thresholds. Potential means and methods could involve the following restrictions to reduce potential vibration impacts to adjacent buildings at which vibration damage could occur:

- No vibratory rollers would be allowed to operate within 36 feet from the adjacent historic buildings or within 20 feet from the other buildings.
- Within 20 feet from adjacent historic buildings or 11 feet from the other adjacent buildings, the size of all bulldozers used during any construction phase activities could be limited to D5 dozers or smaller (i.e., those with horsepower (hp) less than 105 hp and operating weight less than 24,000 pounds).
- No loaded trucks would be allowed to operate within 18 feet of the adjacent historic buildings or 10 feet of the other adjacent buildings.
- No bulldozers of any size would be allowed to operate within 2 feet from the adjacent buildings.
- Should site conditions require the use of any of the equipment described above within the buffer distances identified in Table V.K-9, the project applicant should notify the City, identify appropriate measures to reduce vibration impacts and comply with any additional City recommendations.

With implementation of SCA-NOI-7: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#69), impacts related to vibration damage to adjacent buildings would be reduced to a less-than-significant level.

The long-term operation of the project would not involve the use of any equipment or process that would generate perceptible levels of ground-borne vibration or perceptible levels of ground-borne noise. Therefore, operation of the project would have a less-than-significant impact related to ground-borne vibration or ground-borne noise.

3. Conclusion

Implementation of the project would not result in any new or more severe significant impacts related to construction noise and vibration, ambient noise, or noise exposure than those identified in the Program EIRs. Implementation of SCA-NOI-1: Construction Days/Hours (#61), SCA-NOI-2: Construction Noise (#62), SCA-NOI-3: Extreme Construction Noise (#63), SCA-NOI-4: Construction Noise Complaints (#65), SCA-NOI-5: Operational Noise (#67), SCA-NOI-6: Exposure to Community Noise (#66), and SCA-NOI-7: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#69) would ensure impacts related to noise would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

L. POPULATION AND HOUSING

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;	☒	☐	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or	☒	☐	☐
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR found all potential population and housing impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR found that impacts to housing capacity and potential housing displacement would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found impacts related to increased employment growth potential would be reduced to a less than significant level with implementation of Mitigation Measure C.2, which would require the City to maintain a database of underutilized parcels and to assist developers in locating sites for their developments.

While the City's Housing Element, described below, provides metrics for population and job growth in Oakland, the data relied on Association of Bay Area Governments (ABAG) projections from the year 2013. The following section utilizes 2018 data from ABAG, as it represents a more current representation of future growth in Oakland. ABAG data has traditionally represented the best available approximation of future population and employment changes in the greater San Francisco Bay Area and is therefore the preferred model when available

2. Project Analysis

Population Growth and Displacement of Housing and People (Criteria 12.a and 12.b)

Development under the project would not displace existing housing units or residents on the project site as there is no existing residential development currently located at the site.

The project would demolish the existing parking toll booth and surface parking lot on the project site to construct a new residential building with approximately 380,443 square feet of residential space and 381 residential units. Based on an average household size of 2.6 persons in the City of Oakland, implementation of 381 residential units would add housing for an estimated 991 persons, some of whom may be new residents and may add to the City's population.[121] Construction of the project would also involve temporary employees. The increase in housing due to the construction and development of the project would contribute to accommodating population growth expected in Oakland in the future. Between 2020 and 2025 (which is the estimated time of construction completion), the City of Oakland will gain an estimated 36,585 residents, 12,710 households, and 5,600 jobs. The number of housing units provided by the project would be equivalent to approximately 2.7 percent of the projected growth in residents and 3.0 percent of projected total households during this time period. This population growth would not be considered significant on a city-wide scale and is not expected to result in unanticipated growth directly or indirectly.

According to the Association of Bay Area Government's (ABAG's) Plan Bay Area 2050 Forecasting and Modeling Report,[122] the Bay Area region is forecasted to add 1.4 million new jobs and 1.4 million new households by 2050. The subregion comprising the cities of Oakland, Piedmont, and Alameda is projected to have an increase of approximately 107,000 households and 83,000 jobs between 2015 and 2050. The approximately 991 residents added by the project would represent a marginal fraction of this projected and planned growth. In addition, the project would comply with the requirements of the City of Oakland Affordable Housing Impact Fee Ordinance (Chapter 15.72 of the Oakland Municipal Code) per City of Oakland SCA-PH-1: Jobs/Housing Impact Fee (#70). As such, the project would contain a minimum of 30 percent affordable residential units.

Furthermore, the project site is listed as a housing opportunity site capable of accommodating the City's housing production goals in the 2015-2023 Housing Element. Specifically, the site is identified as opportunity site DJL-17 in Table C-6 of the Housing Element and is listed as having an anticipated number of units between 72 and 86, with an anticipated maximum of 232 dwelling units (prior to application of density bonus) in accordance with the CBD-P zoning designation.

[121] Based on 2.6 persons per household in Oakland as estimated by United States Census.

[122] Association of Bay Area Governments (ABAG), 2021. Plan Bay Area 2050 Forecasting and Modeling Report, October 2021.

While the 1998 LUTE EIR identified Mitigation Measure C.2, which requires the City of Oakland to maintain a database of underutilized parcels and to assist developers in locating sites for their developments, this mitigation measure has already been implemented by the City, and thus is not applicable to the project.

3. Conclusion

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to population growth or displacement than those identified in the Program EIRs. The Program EIRs did not identify any mitigation measures related to population and housing. In addition, implementation of SCA-PH-1: Jobs/Housing Impact Fee (#70), which would require the applicant to comply with the City's Jobs/Housing Impact Fee Ordinance (Chapter 15.68 of the Oakland Municipal Code). Please see Attachment A for a full description of this SCA.

M. PUBLIC SERVICES, PARKS, AND RECREATION FACILITIES

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: i. Fire protection; ii. Police protection; iii. Schools; or iv. Other public facilities.	☒	☐	☐
b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or	☒	☐	☐
c. Include recreational facilities or require the construction or expansion of recreational facilities which might have a substantial adverse physical effect on the environment.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR found all public services and recreational facilities impacts to be less than significant and therefore no mitigation measures or SCAs were required.

The 1998 LUTE EIR found impacts related to the demand for parks would be less than significant and would not require mitigation measures or SCAs. The 1998 LUTE EIR also found that impacts related to police services, fire protection and emergency medical services, schools, and libraries would be reduced to a less than significant level with policies included in the General plan or implementation of mitigation measures that are functionally equivalent to the City's latest SCAs. Lastly, the 1998 LUTE EIR found that impacts related to firefighting and evacuation constraints would be significant and unavoidable even with implementation of a mitigation measure which would require the construction of a fire station in the North Oakland Hills to address the increase in population and housing. However, this specific impact was found to be localized to the Oakland Hills, which consists of areas with narrow street widths, insufficient turning radii, steep slopes, distant fire stations, and where an emergency water supply would be vulnerable to

disruption from natural events and is therefore not relevant to projects located in Downtown Oakland.

2. Project Analysis

Public Services and Parks and Recreation (Criteria 13.a and 13.b)

The project would create demands on public services, parks, and other recreational facilities; however, the development would occur in an urban area already served by these services and facilities. The Program EIRs have determined that the anticipated growth would not impose a burden on existing public services in the Downtown Oakland area and would not create a significant impact.

The project includes a combined total of 42,592 square feet of private and private group-usable open spaces which would minimize the dependency on public parks and other recreation facilities in the vicinity. Public recreational facilities in the project site's vicinity such as Frank H. Ogawa Plaza, Latham Square, Snow Park, Lafayette Square, Lincoln Square Park, and Lake Merritt would be incrementally impacted by the project. Consistent with the findings of the Program EIRs, such impacts would not be considered significant as the size and type of this project falls within the scope of new development considered in the Program EIRs. Additionally, there are no unique circumstances associated with the project compared to other development projects in downtown and development anticipated in the Program EIRs that would increase such impacts to a level of significance. The project could also cause an incremental increase in demand for police and fire protection services; however, adherence to General Plan policies from the LUTE[123] (N.12.1: Developing Public Service Facilities, N.12.2: Making Schools Available, and N.12.5: Reducing Capital Disparities) and Safety Element[124] (F1-1: Maintain and enhance the city's capacity for emergency response, fire prevention and fire-fighting and F1-2: Continue, enhance or implement programs that seek to reduce the risk of structural fires) would mitigate potential impacts to a less-than-significant level consistent with the findings of the LUTE EIR. As described above, the 1998 LUTE EIR did identify one significant and unavoidable impact related public services; however, that particular impact was localized to the Oakland Hills and is not relevant to this project, which is located in Downtown Oakland.

The project is within the development envelope analyzed in the Program EIRs and the increase in demand for public services and recreational facilities is consistent with that analysis, finding no significant impact. Compliance with standard City practices would further ensure the project would have no significant impacts related to services. In addition, adherence to the applicable

[123] City of Oakland, 1998a, op. cit.
[124] City of Oakland, 2004. General Plan: Safety Element, November.

General Plan's OSCAR Element[125] policies would ensure that any potential impacts to recreational facilities are not significant.

The project could indirectly increase student enrollment at local schools as some future employees of the project's office space might move to Oakland as result of the project.

The project sponsor with be required to comply with SCA-PS-1: Capital Improvements Impact Fee (#72), which would require the compliance with the requirements of the City of Oakland Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code). Funds deposited into the Capital Improvements Impact Fee Fund, and all interest and investment earnings thereon, shall be used to pay for projects that are required for fire, police, library, parks and recreation, or storm drain services. In addition, pursuant to SB 50,[126] the project sponsor would be required to pay school impact fees, which are established to offset potential impacts from new development on school facilities.[127] Consistent with the findings of the Program EIRs, compliance with these measures would ensure that any such impacts remain less than significant.

3. Conclusion

Consistent with the findings of the Program EIRs, the project would not result in any significant impacts related to public services, parks, and recreation. Further, based on an examination of the Program EIRs, implementation of the project would not substantially increase the severity of impacts previously identified in the Program EIRs, nor would it result in new significant impacts related to public services, parks, and recreation that were not previously identified in the Program EIRs. In addition, implementation of SCA-PS-1: Capital Improvements Impact Fee (#72), which would require the applicant to comply with the City's Capital Improvements Impact Fee Ordinance (Chapter 15.74 of the Oakland Municipal Code). Please see Attachment A for a full description of this SCA.

[125] City of Oakland, 1996. General Plan: Open Space, Conservation, and Recreation Element, June.

[126] Senate Bill 50, 1998 Legislative Session, California 1998.

[127] School Facility Source, 2016. School Facility Fee Justification Report for Residential, Commercial, and Industrial Development Projects for the Oakland Unified School District. Available at: http://www.ousd.org/cms/lib07/CA01001176/Centricity/Domain/95/Oakland%20USD%20-%20Level%20I%202016%20FINAL%2006-06-2016.pdf, accessed July 20, 2018.

N. TRANSPORTATION AND CIRCULATION

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle, and pedestrian facilities (except for automobile level of service or other measures of vehicle delay); or	☒	☐	☐
b. Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate efficiency measure); or	☒	☐	☐
c. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas or by adding new roadways to the network.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR found, using the thresholds applicable at the time, that development facilitated by the Renewal Plan would increase the vehicle-to-capacity ratio by more than 0.03 along six roadway segments and that the level of service (LOS) impact would be significant and unavoidable along the identified segments (listed below) except Embarcadero east of 5th Avenue.[128]

- Grand Avenue between Harrison Street and I-580
- 7th Street east of Fallon Street
- Embarcadero east of Oak Street
- Broadway north of Grand Avenue
- 5th Avenue south of East 12th Street

A significant and unavoidable impact was also identified in the 2011 Renewal Plan EIR related to railroad crossing safety even after implementation of identified mitigation measures.

The 1998 LUTE EIR also identified significant and unavoidable impacts related to LOS on several roadway segments, including the following highways and arterials:

- SR 24 - west of the Caldecott Tunnel (AM/PM)
- SR 123 (San Pablo Avenue) - east of Stanford Avenue (AM/PM)

[128] The Renewal EIR found that Embarcadero east of 5th Avenue roadway seggment would be reduced to a less-than-significant level with the implementation of mitigation measures identified in the Oak to Ninth EIR. The identified measures have since been constructed as part of the Brooklyn Basin project (formally referred to as Oak to Ninth).

- SR 260 (Webster-Posey Tubes) (AM/PM)
- Embarcadero - Oak Street to 5th Avenue (AM/PM)
- Hegenberger Road - I-580 to I-880 (AM/PM)
- International (E. 14th) Boulevard - High Street to Hegenberger Road (AM/PM)
- San Pablo Avenue (SR 123) - I-580 to Grand Avenue (PM)
- Grand Avenue - Harrison Street to I-580 (AM/PM)

The 2010 Housing Element Update EIR found that adoption of the 2015-2023 Housing Element with its 38 new actions does not directly encourage or induce new construction, so there cannot be any project-level transportation or traffic impacts also identified significant and unavoidable impacts related to LOS on several roadway.

While significant and avoidable impacts were identified, none of these described impacts are applicable to this project or site given the project's site geographical location and expected traffic distribution. Furthermore, on April 14, 2017, the City of Oakland's Planning Commission adopted new Transportation Impact Review Guidelines for Land Use Development Projects consistent with Senate Bill 743 (Steinberg 2013), implementing a shift from traffic delay metrics to thresholds based on a Vehicle Miles Traveled standard (VMT) in the City of Oakland. The revised thresholds remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA and replace them with the VMT standard.

2. Project Analysis

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's CEQA Thresholds of Significance Guidelines related to transportation impacts consistent with SB 743. The revised thresholds remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The recommendation aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis with adopted plans and polices related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. This section describes the potential impacts of the project on the transportation system. It includes a discussion of significant topics under CEQA and uses VMT standards, instead of LOS standards, as discussed above.

Conflicts with Plans, Ordinances, or Policies Relating to Safety, or Performance of the Circulation System (Criterion 14.a)

The project would replace an existing surface parking lot with a multi-family residential building containing 381 dwelling units. The project proposes a parking garage with 167 parking spaces on

the first four floors. The garage would be accessible via a left-in/left-out only driveway on Franklin Street, approximately 150 feet south of 15th Street.

The LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. The project would encourage the use of non-automobile transportation modes by providing a multi-family residential building with minimal parking in a dense, walkable urban environment that is well-served by local and regional transit.

The project is consistent with both the City's 2017 Pedestrian Master Plan ("Oakland Walks") and the 2019 Bicycle Master Plan ("Let's Bike Oakland") as it would not make major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities.

Adjacent to the project site on Franklin Street, the City of Oakland is currently designing Class 4 protected bicycle lanes that would provide a protected two-way cycle track on the west side of the street. The project would not modify the public right-of-way and would not include features that would adversely affect the installation of this facility. If the protected bike facility on Franklin Street is provided along the project frontage, bicycles traveling in both directions of the protected bike lanes may have a conflict with vehicles entering and exiting the project driveway. Since the existing parking lot at the project site provides a driveway on Franklin Street, the proposed project would not increase the number of conflict points compared to current conditions. It is recommended that the project sponsor coordinate with the City of Oakland to ensure that adequate sight distance between motorists entering and exiting the driveway and cyclists in both directions of the bike facility and appropriate signage and striping in and around the driveway conflict zone (see Attachment J for more information).The project would generate an estimated 67 AM peak hour automobile trips and 82 PM peak hour automobile trips.[129] Because the project would generate more than 50 peak-hour trips, SCA-TRANS-1: Transportation and Parking Demand (TDM) Management (#77) is required. Attachment J presents the TDM Plan for the project.

The project is consistent with applicable plans, ordinances, and policies and would not cause a significant impact by conflicting with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay). For these reasons, the project would not conflict with adopted plans, ordinances, or policies resulting in a less-than-significant impact; no mitigation measures are required.

[129] Fehr and Peers, 2020. 1431 Franklin Street Residential Project – Transportation and Parking Demand Management Plan. (included as Attachment H)

Cause Substantial Additional Vehicle Miles Traveled (Criterion 14.b)

VMT Screening

Many factors affect travel behavior, including density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes generate more automobile travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and non-single occupancy vehicle travel options are available.

Given these travel behavior factors, most of Oakland has lower VMT per capita and VMT per worker ratios than the nine-county San Francisco Bay Area region due to its density and relation to factors mentioned above. Further, within the City of Oakland, some neighborhoods may have lower VMT ratios than others.

The Governor's Office of Planning and Research established that the VMT metric is the appropriate metric to fully account for the many factors that affect travel behavior and specifically indicated that VMT should be reported on a per capita basis for residential uses, an approach which is also reflected in the City of Oakland's Transportation Impact Review Guidelines[130] (TIRG).

Vehicle Miles Traveled Estimate

Estimating VMT requires the use of travel demand models to fully capture the length of trips on the transportation network, as well as the changes in VMT behavior that may occur with the introduction of the project. This analysis presents use of the Metropolitan Transportation Commission (MTC) Travel Model to fully analyze the VMT impacts of the project. The following describes how the MTC Travel Model estimates VMT.

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs, for transportation analysis and other planning purposes. The MTC Travel Model includes 116 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower-density neighborhoods.

The MTC Travel Model assigns all predicted trips within, across, or to/from the nine-county San Francisco Bay Area region onto the roadway network and the transit system by mode (single-

[130] City of Oakland, 2017. Transportation impact Review Guidelines, April 14. Available at: https://www.oaklandca.gov/topics/modernizing-transportation-impact-review, accessed December 22, 2020.

driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The travel behavior from the MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG).
- Population data created using the 2000 US Census and modified using the open source PopSyn software.
- Zonal accessibility measurements for destinations of interest.
- Travel characteristics and vehicle ownership rates derived from the 2000 Bay Area Travel Survey (BATS).
- Observed vehicle counts and transit boardings.

The daily VMT output from the MTC Travel Model for residential uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the project site. In this way, all of the VMT for an individual resident is included, not just trips into and out of the person's home or workplace. For example, a resident leaves their apartment in the morning, stops for coffee, and then goes to the office. In the afternoon, the resident heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work, the resident goes to the gym and then joins friends at a restaurant for dinner before returning home. All the stops and trips within the resident's day form their "tour." The tour-based approach would add up the total number of miles driven over the course of her tour and assign it as her daily VMT.

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions.

Thresholds of Significance for VMT

According to the City of Oakland TIRG, the following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project will cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project will cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.
- For local-serving retail projects[131], a project will cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.

[131] The City of Oakland's TIRG defines local-serving retail as retail not exceeding 80,000 square-feet of contiguous retail space.

Because the project is a residential project, the criteria used in this analysis is if VMT exceeds the existing regional VMT per capita minus 15 percent.

VMT Screening Criteria

VMT impacts would be less than significant for a project if any of the following identified screening criteria are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day.
2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15 percent or more below the regional average.
3. Near Transit Stations: The project is located in a Transit Priority Area or within 0.5-mile of a Major Transit Corridor or Stop[132] and satisfies the following:
   - Has a Floor Area Ratio (FAR) of more than 0.75.
   - Does not include more parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site).
   - Is consistent with Plan Bay Area, the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Transportation Commission).

VMT Impact Analysis

The project would include 350 multi-family residential units. Per direction provided in the TIRG, the regional VMT per capita minus 15-percent is used as the threshold of significance. The project satisfies the Low-VMT Area (#2) and Near Transit Stations (#3) criteria, as described below.

Criterion #1: Small Projects

The project would generate more than 100 trips per day and therefore does not meet Criterion #1.

Criterion #2: Low-VMT Area

Table V.N-1 below describes the 2020 and 2040 VMT for TAZ 971 in the MTC Model, the TAZ in which the project is located, as well as the applicable VMT thresholds of 15 percent below the regional average. As shown in Table V.N-1, the 2020 and 2040 average daily VMT (4.5 and 4.1,

[132] Major transit stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

respectively) per capita in the project TAZ are below the regional average minus 15 percent (12.8 and 11.7, respectively). Therefore, the project would not exceed VMT more than 15 percent below the regional averages, and project impacts with respect to VMT would be less than significant.

TABLE V.N-1 DAILY VEHICLE MILES TRAVELED SUMMARY

	Bay Area				TAZ 971	
	2020		2040			
Land Use	Regional Average	Regional Average Minus 15%	Regional Average	Regional Average Minus 15%	2020	2040
Residential (VMT per capita)[a]	15.0	12.8	13.8	11.7	4.5	4.1

[a] MTC Model results available at https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=5dac76d69b3d41e583882e146491568b, accessed August 2020.
Source: Fehr & Peers, 2020.

Criterion #3: Near Transit Stations

The project would be located about 0.1 miles from the 12th Street Oakland BART station and frequent bus service along Broadway (Route 6 with 10-minute peak headways, Route 18 with 15-minute peak headways, Route 51A with 10-minute peak headways, and Routes 72/72M/72R with 10- to 12-minute peak headways prior to the COVID-19 pandemic). The project would satisfy Criterion # 3 because it would meet the following three conditions:

- The proposed project would have a FAR of 17.9, which is greater than 0.75.
- The project would include 167 parking spaces, corresponding to 0.44 spaces per unit. Typical motor vehicle ownership for residential uses in the project area is estimated to be 0.7 spaces per unit.[133] The City of Oakland Municipal Code Section 17.116.060 has no parking minimum requirement and allows a maximum of 1.25 spaces per unit for multi-family residential developments in the CBD-P zone. The project would not provide more parking for use by residents than other typical nearby uses, nor would it provide more parking than allowed by the Municipal Code.
- The project is located within the Downtown Oakland & Jack London Square Priority Development Area (PDA) as defined by Plan Bay Area and is therefore consistent with the region's Sustainable Communities Strategy.

[133] Based on US Census data from the 2019 American Community Survey (ACS) 5-Year Estimates for average vehicle ownership of renter households (Table B25044) in downtown Oakland (Alameda County Census Tracts 4028, 4029, 4030, 4031, and 4034).

Vehicle Miles Travelled Screening Conclusion

The project would satisfy the Low-VMT Area (#2) and the Near Transit Stations (#3) criteria and therefore would have a less-than-significant impact related to VMT.

Substantially Induce Additional Automobile Travel by Increasing Physical Roadway Capacity in Congested Areas or by Adding New Roadways to the Network (Criterion 14.c)

The project would not modify the roadway network surrounding the project site. Therefore, the project would not substantially induce additional automobile travel by increasing the physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) and would not add new roadways to the network and would have a less-than-significant impact on inducing additional automobile traffic.

3. Conclusion

The project's potential impacts related to pedestrian, bicycle, transit, emergency access, and design and incompatible use considerations would be less than significant. The project would not result in any other transportation related significant impacts.

Further, implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#77) would be applicable to the project and would ensure that transportation and circulation-related impacts associated with the project would be less than significant.

Consistent with the findings of the Program EIRs, implementation of the project would not result in any new or more severe significant impacts related to pedestrian, bicycle, transit, emergency access, or design identified in the Program EIRs. Implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#77) would ensure no significant CEQA impacts related to transit occur. Additionally, independent of CEQA, the City will require implementation of SCA-TRANS-2: Construction Activity in the Public Right-of-Way (#74), SCA-TRANS-3: Bicycle Parking (#75), SCA-TRANS-4: Transportation Improvements (#76), SCA-TRANS-5: Transportation Impact Fee (#78) and SCA-TRANS-6: Plug-In Electric Vehicle Charging Infrastructure (#80) would further minimize the already less-than-significant transportation impacts. Please see Attachment A for a full description of the applicable SCAs.

O. UTILITIES AND SERVICE SYSTEMS

Would the project:	Equal or Less Severity of Impact Previously Identified in Program EIRs	Substantial Increase in Severity of Previously Identified Significant Impact in EIR	New Significant Impact
a. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;	☒	☐	☐
b. Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
d. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
e. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;	☒	☐	☐
f. Violate applicable federal, state, and local statutes and regulations related to solid waste;	☒	☐	☐
g. Violate applicable federal, state, and local statutes and regulations relating to energy standards; or	☒	☐	☐
h. Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.	☒	☐	☐

1. Program EIR Findings

The 2011 Renewal Plan EIR and 2010 Housing Element Update EIR and its 2014 Addendum found all impacts to utilities and service systems to be less than significant with applicable SCAs.

The 1998 LUTE EIR, which analyzed utilities and service systems, found all potential impacts to be less than significant after implementation of mitigation measures, which are functionally equivalent to the City's current SCAs.

2. Project Analysis

Water, Wastewater, and Stormwater (Criteria 15.a and 15.b)

The project site is in an already built-out urban area, and no new utility infrastructure would be required. While the project would increase the amount of water needed and wastewater generated in the project area, it does not include any new, less efficient water uses than what was previously evaluated in the Program EIRs. For these reasons, the project would not result in the need for additional water entitlements or water-related facilities.

Wastewater generated by the project would be subject to both primary and secondary treatment and would not violate the wastewater treatment requirements of the San Francisco Bay RWQCB. The current project site is composed of entirely impervious surface area. The project thus would not increase this amount and would likely reduce the amount of stormwater generated at the site through landscaping, other infrastructure improvements, and from compliance with City of Oakland requirements.

In addition, implementation of City SCAs would further address any potential impacts on water, wastewater and stormwater, including: SCA-UTIL-1: Sanitary Sewer System (#86) and SCA-UTIL-2: Storm Drain System (#87). The City of Oakland SCA related to recycled water (SCA #88), would not apply to the project as there is currently no access to recycled water to the site.

Solid Waste Services (Criterion 15.c)

Nonhazardous solid waste in the analyzed area is ultimately hauled to the Altamont Landfill and Resource Facility, which has an expected closure date of 2037.[134] As such, the Altamont Landfill would have sufficient capacity to accept waste generated by development under the project. In addition, implementation of SCA-UTIL-3: Recycling Collection and Storage Space (#83), would be required and the project would be required to comply with the City of Oakland Recycling Space Allocation Ordinance (Chapter 17.118 of the Oakland Planning Code). Furthermore, implementation of SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#81) would be required of the project, which would require to compliance with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (Chapter 15.34 of the Oakland Municipal Code). Implementation of these SCAs and adherence with City of Oakland requirements would ensure no significant impacts related to solid waste would occur.

[134] Alameda County Waste Management Authority, 2003. Alameda County Integrated Waste Management Plan, amended March 22, 2017.

Energy (Criterion 15.d)

As described in *Section V.E, Energy*, the project would be required to comply with the standards of Title 24 of the California Code of Regulations. In addition, the project would be required to implement SCA-UTIL-5: Underground Utilities (#82), which requires all new gas, electric, cable, and telephone facilities underground, and SCA-UTIL-6: Green Building Requirements (#84), which requires compliance with the green building ordinance. Furthermore, the project applicant has provided their preliminary ECAP checklist and would comply with all applicable requirements, which would further reduce the expected amount of energy consumed by the project. Lastly, the project would consume energy expected of a typical residential building (or less with implementation of the measures stated previously) and does not feature any components that would result an exceptional amount of energy usage such that additional energy facilities would need to be constructed. Implementation of these SCAs and adherence with Title 24 and City of Oakland requirements would ensure no significant impacts related to energy would occur.

3. Conclusion

The project would not result in any new or more severe significant impacts related to water supply, sewer capacity, stormwater drainage facilities, solid waste services, and energy than those identified in the Program EIRs. Consistent with the findings of the Program EIRs, the project would be adequately served by utilities and service systems and all impacts to utilities and service systems would be less than significant with applicable SCAs.

Implementation of SCA-UTIL-1: Sanitary Sewer System (#86), SCA-UTIL-2: Storm Drain System (#87), SCA-UTIL-3: Recycling Collection and Storage Space (#83), SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#81), SCA-UTIL-5: Underground Utilities (#82), SCA-UTIL-6: Green Building Requirements (#84), and SCA-UTIL-7: Water Efficient Landscape Ordinance (WELO) (#92), as well as compliance with Title 24 and CALGreen requirements would ensure that impacts to utilities and service systems would be less than significant. Please see Attachment A for a full description of the applicable SCAs.

ATTACHMENT A: MITIGATION MEASURES AND STANDARD CONDITIONS OF APPROVAL AND REPORTING PROGRAM

A. Applicable Mitigation Measures

The following applicable mitigation measures from the 1998 LUTE EIR would be required of the project to ensure that any impacts to the environment are reduced to the maximum extent feasible. All other mitigations which are functionally equivalent to the City of Oakland's Standard Conditions of Approval are discussed are addressed below in the Standard Conditions of Approval table.

> **Mitigation Measure N.1:** The City shall require the project sponsors to incorporate specific design elements in the final siting and designs for the high rises that could reduce ground-level winds within the Downtown Showcase District.

B. Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards adopted as Standard Conditions of Approval (Standard Conditions of Approval, or SCAs) were originally adopted by the City in 2008 (Ordinance No. 12899 C.M.S.) pursuant to Public Resources Code section 21083.3) and have been incrementally updated over time. The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, Green Building Ordinance, historic/Landmark status, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City of Oakland determines which SCAs apply based upon the zoning district, community plan, and the type of permits/approvals required for the project. The City of Oakland also will determine which SCAs apply to a specific project based on the specific project type and/or project site characteristics. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume these SCAs will be implemented by the project, and these SCAs are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA document—which is consistent with the measures and conditions presented in the City of Oakland General Plan, Land Use and Transportation EIR (LUTE EIR, 1998) and the 2011 Central District Urban Renewal Plan Amendments EIR (2011 Renewal Plan EIR)—are included herein. To the extent that any SCA identified in the CEQA document was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA document.
- The second column identifies the monitoring schedule or timing applicable to the project.
- The third column names the party responsible for monitoring the required action for the project.

In addition to the SCAs identified and discussed in the CEQA document, other SCAs that are applicable to the project are included herein.

The project sponsor is responsible for compliance with any recommendations in approved technical reports and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific SCA, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the SCAs will be the responsibility of the Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—i.e., **SCA-AIR-1, SCA-AIR-2**, etc. The SCA titles are also provided—i.e., **SCA-AIR-1: Dust Controls – Construction Related (#21)**.

	Implementation/Monitoring		
Standard Conditions of Approval	**When Required**	**Initial Approval**	**Monitoring/ Inspection**
Aesthetics, Shadow, and Wind			
SCA-AES-1: *Lighting (#19)*. Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Prior to building permit final	N/A	Bureau of Building
SCA-AES-2: *Landscape Plan (#18).* a. ***Landscape Plan Required*** • The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code. Proposed plants shall be predominantly drought tolerant. Specification of any street trees shall comply with the Master Street Tree List and Tree Planting Guidelines	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
(which can be viewed at http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak042662.pdf and http://www2.oaklandnet.com/oakca1/groups/pwa/documents/form/oak025595.pdf, respectively), and with any applicable streetscape plan.			
b. Landscape Installation • The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.	Prior to building permit final	Bureau of Planning	Bureau of Building
c. Landscape Maintenance • All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.	Ongoing	N/A	Bureau of Buildings
SCA-AES-3: *Trash and Blight Removal (#16).* The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.	Ongoing	N/A	Bureau of Building
SCA-AES-4: *Graffiti Control (#17).* a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.	Ongoing	N/A	Bureau of Buildings

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).			
SCA-AES-5: *Public Art for Private Development (#20).* The project is subject to the City's Public Art Requirements for Private Development, adopted by Ordinance No. 13275 C.M.S. ("Ordinance"). The public art contribution requirements are equivalent to one-half percent (0.5%) for the "residential" building development costs, and one percent (1.0%) for the "non-residential" building development costs. The contribution requirement can be met through: 1) the installation of freely accessible art at the site; 2) the installation of freely accessible art within one-quarter mile of the site; or 3) satisfaction of alternative compliance methods described in the Ordinance, including, but not limited to, payment of an in-lieu fee contribution. The applicant shall provide proof of full payment of the in-lieu contribution and/or provide plans, for review and approval by the Planning Director, showing the installation or improvements required by the Ordinance prior to issuance of a building permit. Proof of installation of artwork, or other alternative requirement, is required prior to the City's issuance of a final certificate of occupancy for each phase of a project unless a separate, legal binding instrument is executed ensuring compliance within a timely manner subject to City approval.	Payment of in-lieu fees and/or plans showing fulfillment of public art requirement – Prior to Issuance of Building permit	Bureau of Planning	Bureau of Planning
Air Quality			
SCA-AIR-1: *Criteria Air Pollutants – Construction Related (#21).* The project applicant shall implement all of the following applicable basic control measure for criteria pollutants during construction of the project as applicable: a. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time of two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clean signage to this effect shall be provided for construction workers at all access points. b. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Regulations ("California Air Resources Board Off-Road Diesel Regulations"). c. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed. d. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand. e. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings. f. All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.			
SCA-AIR-2: *Dust Controls – Construction Related (#20).* The project applicant shall implement all of the following applicable dust control measures during construction of the project: a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. d. Limit vehicle speeds on unpaved roads to 15 miles per hour. e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph. f. All trucks and equipment, including tires, shall be washed off prior to leaving the site. g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel. h. Apply and maintain vegetative ground cover (e.g., hydroseed) or non-toxic soil stabilizers to disturbed areas of soil that will be inactive for more than one month. Enclose, cover, water twice	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). i. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. j. When working at a site, install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of the site, to minimize wind-blown dust. Windbreaks must have a maximum 50 percent air porosity. k. Post a publicly visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours. l. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.			
SCA-AIR-3: *Asbestos in Structures (#26).* The project applicant shall comply with all applicable laws and regulations regarding demolition and renovation of Asbestos Containing Materials (ACM), including but not limited to California Code of Regulations, Title 8; California Business and Professions Code, Division 3; California Health and Safety Code sections 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended. Evidence of compliance shall be submitted to the City upon request.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction
SCA-AIR-4: *Diesel Particulate Matter Controls – Construction Related (#22).* ***a. Diesel Particulate Matter Reduction Measures*** The project applicant shall implement appropriate measures during construction to reduce potential health risks to sensitive receptors due to exposure to diesel particulate matter (DPM) from construction emissions. The project applicant shall choose **one** of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with current guidance from the California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment to determine the health risk to sensitive receptors exposed to DPM from project construction emissions. The HRA shall be submitted to the City (and the Air District if specifically requested) for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then DPM reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, DPM reduction measures shall be identified to reduce the health risk to acceptable levels as set forth under subsection b	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
below. Identified DPM reduction measures shall be submitted to the City for review and approval prior to the issuance of building permits and the approved DPM reduction measures shall be implemented during construction. -or- ii. All off-road diesel equipment shall be equipped with the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by CARB. The equipment shall be properly maintained and tuned in accordance with manufacturer specifications. This shall be verified through an equipment inventory submittal and Certification Statement that the Contractor agrees to compliance and acknowledges that a significant violation of this requirement shall constitute a material breach of contract.			
b. Construction Emissions Minimization Plan (if required by a above) The project applicant shall prepare a Construction Emissions Minimization Plan (Emissions Plan) for all identified DPM reduction measures (if any). The Emissions Plan shall be submitted to the City (and the Bay Area Air Quality District if specifically requested) for review and approval prior to the issuance of building permits. The Emissions Plan shall include the following: i. An equipment inventory summarizing the type of off-road equipment required for each phase of construction, including the equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, and engine serial number. For all VDECS, the equipment inventory shall also include the technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date. ii. A Certification Statement that the Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of contract.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA-AIR-5: *Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24)*. The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose **one** of the following methods: a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. - or - b. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.			
SCA-AIR-6: *Exposure to Air Pollution (Toxic Air Contaminants) (#23).* ***a. Health Risk Reduction Measures*** The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose **one** of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. The approved risk reduction measures shall be implemented during construction and/or operations as applicable. - or - ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

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be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. • Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). • Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. • The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. • Sensitive receptors shall be located on the upper floors of buildings, if feasible. • Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood *(Sequoia sempervirens*). • Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. • Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. • Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: o Installing electrical hook-ups for diesel trucks at loading docks. o Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. o Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. o Prohibiting trucks from idling for more than two minutes. o Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.			
b. Maintenance of Health Risk Reduction Measures The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and	Ongoing	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
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maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.			
Geology, Soils, and Geohazards			
SCA-GEO-1: *Construction-Related Permit(s) (#36).* The project applicant shall obtain all required construction-related permits/ approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-GEO-2: *Seismic Hazards Zone (Landslide/Liquefaction) (#39).* The project applicant shall submit a site-specific geotechnical report, consistent with California Geological Survey Special Publication 117 (as amended), prepared by a registered geotechnical engineer for City review and approval containing at a minimum a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
Greenhouse Gas and Climate Change			
SCA-GHG-1: *GHG Reduction Plan (#41).* ***a. Greenhouse Gas (GHG) Reduction Plan Required*** The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval and shall implement the approved GHG Reduction Plan. The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below <u>at least one</u> of the Bay Area Quality Management District's (BAAQMD's) CEQA Thresholds of Significance (1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population) The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), and additional GHG reduction measures available to further reduce GHG emissions, and (c) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase. Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
Greenhouse Gas Mitigation Measures (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "carbon credits") as explained below. The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States. As with preferred locations for the implementation of all GHG reductions measures, the preference for carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of carbon credit purchases shall be based on current market value at the time purchased and shall be based on the project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits.			
b. GHG Reduction Plan Implementation During Construction The project applicant shall implement the GHG Reduction Plan during construction of the project. For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be implemented during construction. For physical GHG reduction measures to be incorporated into off-site projects, the project applicant shall obtain all necessary permits/approvals and the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval. These off-site improvements shall be installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For GHG reduction measures involving the purchase of carbon credits, evidence of the payment/purchase shall be submitted to the City for review and approval prior to completion of the project (or prior to completion of the project phase, for phased projects).	During Construction	Bureau of Planning	Bureau of Building
c. GHG Reduction Plan Implementation After Construction The project applicant shall implement the GHG Reduction Plan after construction of the project (or at the completion of the project phase for phased projects). For operational GHG reduction measures to be	Ongoing	Bureau of Planning	Bureau of Planning

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
incorporated into the project or off-site projects, the measures shall be implemented on an indefinite and ongoing basis. The project applicant shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan. **Annual Report.** Implementation of the GHG reduction measures and related requirements shall be ensured through compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report ("Annual Report"), for review and approval by the City Planning Director or his/her designee. The Annual Report shall be submitted to an independent reviewer of the City's choosing, to be paid for by the project applicant. The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan. The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project's 2005 "business-as-usual" baseline GHG emissions, as confirmed by the City through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below. **Corrective Procedure.** If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures ("Corrective GHG Action Plan"). The project applicant shall then implement the approved Corrective GHG Action Plan. If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City may, in addition to its other remedies, (a) assess the project applicant a financial penalty based			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed. The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline. In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant has made a good faith effort to comply with the GHG Reduction Plan. The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan. **Timeline Discretion and Summary.** The City shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.			
Hazards and Hazardous Materials			
SCA-HAZ-1: *Hazardous Building Materials and Site Contamination (#43).* ***a. Hazardous Building Materials Assessment*** The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	Prior to approval of demolition, grading, or building permits	Bureau of Building	Bureau of Building
b. Environmental Site Assessment Required The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for	Prior to approval of construction-related permit.	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.			
c. Health and Safety Plan Required The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
d. Best Management Practices (BMPs) Required for Contaminated Sites The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. **ii.** Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.	During construction	N/A	Bureau of Building
SCA-HAZ-2: *Hazardous Materials Related to Construction (#42)*. The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and	During construction	N/A	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.			
Historical Resources			
SCA-HIST-1: *Archaeological and Paleontological Resources – Discovery During Construction (#32).* Pursuant to CEQA Guidelines Section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.			
SCA-HIST-2: *Human Remains – Discovery During Construction (#34)*. The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. **Provision A: Intensive Pre-Construction Study** The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A report disseminating the results of this research. c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction.	Prior to approval of construction-related permit; during construction	Bureau of Building	Bureau of Building

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	When Required	Initial Approval	Monitoring/ Inspection
Provision B: Construction ALERT Sheet The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.			
Hydrology and Water Quality			
SCA-HYD-1: *Erosion and Sedimentation Control Measures for Construction (#48).* The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.	During construction	N/A	Bureau of Building
SCA-HYD-2: *NPDES C.3 Stormwater Requirements for Regulated Projects (#53).* ***a. Post-Construction Stormwater Management Plan Required*** The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements and shall implement the approved Plan during construction. The Post-	Prior to approval of construction-related permit	Bureau of Planning; Bureau of Building	Bureau of Building

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	When Required	**Initial Approval**	**Monitoring/ Inspection**
Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.			
b. Maintenance Agreement Required The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	Prior to building permit final	Bureau of Building	Bureau of Building
Noise			
SCA-NOI-1: *Construction Days/Hours (#61).* The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.	During construction	N/A	Bureau of Building

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c. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.			
SCA-NOI-2: *Construction Noise (#62)*. The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible. b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City	During construction	N/A	Bureau of Building

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determines an extension is necessary and all available noise reduction controls are implemented.			
SCA-NOI-3: *Extreme Construction Noise (#63).* ***a. Construction Noise Management Plan Required*** Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: a. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; b. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; c. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; d. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and e. Monitor the effectiveness of noise attenuation measures by taking noise measurements.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
b. Public Notification Required The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.	During construction	Bureau of Building	Bureau of Building
SCA-NOI-4: *Construction Noise Complaints (#65).* The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

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	When Required	**Initial Approval**	**Monitoring/ Inspection**
phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.			
SCA-NOI-5: *Operational Noise (#67).* Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing	N/A	Bureau of Building
SCA-NOI-6: *Exposure to Community Noise (#66).* The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels b. 50 dBA: Administrative offices; group assembly activities c. 55 dBA: Commercial activities d. 65 dBA: Industrial activities	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA-NOI-7: *Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#69).* The project applicant shall submit a Vibrations Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional fir City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at the office building at 300 27th Street and the building closest to the project site from Westlake Middle School at 2629 Harrison Street. The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. The applicant shall implement the recommendations during construction.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
Population and Housing			
SCA-PH-1: *Jobs/Housing Impact Fee (#70).* The project applicant shall comply with the requirements of the City of Oakland Jobs/Housing Impact Fee Ordinance (chapter 15.68 of the Oakland Municipal Code).	Prior to issuance of building permit; subsequent milestones pursuant to ordinance	Bureau of Building	N/A
Public Services, Parks, and Recreation Facilities			
SCA-PS-1: *Capital Improvements Impact Fee (#72).* The project applicant shall comply with the requirements of the City of Oakland	Prior to issuance of building permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
Capital Improvements Fee Ordinance (chapter 15.74 of the Oakland Municipal Code).			
Utilities and Service Systems			
SCA-UTIL-1: *Sanitary Sewer System (#86)*. The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to approval of construction-related permit	Public Works Department, Department of Engineering and Construction	N/A
SCA-UTIL-2: *Storm Drain System (#87)*. The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-UTIL-3: *Recycling Collection and Storage Space (#83)*. The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two (2) cubic feet of storage and collection space per residential unit is required, with a minimum of ten (10) cubic feet. For nonresidential projects, at least two (2) cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten (10) cubic feet.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA-UTIL-4: *Construction and Demolition Waste Reduction and Recycling (#81)*. The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/ modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.	Prior to approval of construction-related permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
SCA-UTIL-5: *Underground Utilities (#82).* The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During construction	N/A	Bureau of Building
SCA-UTIL-6: *Green Building Requirements (#84).* ***a. Compliance with Green Building Requirements During Plan-Check*** The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. • Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • LEED Silver per the appropriate checklist approved during the Planning entitlement process. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted	Prior to approval of construction-related permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories.			
b. Compliance with Green Building Requirements During Construction The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. **iii.** Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.	During construction	N/A	Bureau of Building
c. Compliance with Green Building Requirements After Construction Prior to the finalizing the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.	Prior to Final Approval	Bureau of Planning	Bureau of Building
SCA-UTIL-7: *Water Efficient Landscape Ordinance (WELO) (#89).* The project applicant shall comply with California's Water Efficient Landscape Ordinance (WELO) in order to reduce landscape water usage. For any landscape project with an aggregate (total noncontiguous) landscape area equal to 2,500 sq. ft. or less. The project applicant may implement either the Prescriptive Measures or the Performance Measures, of, and in accordance with the California's Model Water Efficient Landscape Ordinance. For any landscape project with an aggregate (total noncontiguous) landscape area over 2,500 sq. ft., the project applicant shall implement the Performance Measures in accordance with the WELO. Prescriptive Measures: Prior to construction, the project applicant shall submit documentation showing compliance with Appendix D of California's Model Water Efficient Landscape Ordinance (see website below starting on page 23): http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf Performance Measures: Prior to construction, the project applicant shall prepare and submit a Landscape Documentation Package for review and approval, which includes the following: a. Project i. Date,	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
ii. Applicant and property owner name, iii. Project address, iv. Total landscape area, v. Project type (new, rehabilitated, cemetery, or homeowner installed), vi. Water supply type and water purveyor, vii. Checklist of documents in the package, and, viii. Applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package." b. Water Efficient Landscape Worksheet i. Hydrozone Information Table ii. Water Budget Calculations with Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use c. Soil Management Report d. Landscape Design Plan e. Irrigation Design Plan, and f. Grading Plan Upon installation of the landscaping and irrigation systems, the Project applicant shall submit a Certificate of Completion and landscape and irrigation maintenance schedule for review and approval by the City. The Certificate of Compliance shall also be submitted to the local water purveyor and property owner or his or her designee. For the specific requirements within the Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan and Grading Plan, see the link below. *http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%20Official%20CCR%20pages.pdf*			

Provided below is the table for SCA-TRANS-1: Transportation and Parking Demand Management (#77), section a. Transportation and Parking Demand Management (TDM) Plan Required, subsection iv.

Improvement	Required by code or when…
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist, and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist
Curb extensions or bulb-outs	• Identified as an improvement within site analysis

Improvement	Required by code or when…
Implementation of a corridor-level bikeway improvement	• A buffered Class II or Class IV bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.	• Always required
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.
Intersection improvements[1]	• Identified as an improvement within site analysis
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required
No monthly permits and establish minimum price floor for public parking[2]	• If proposed parking ratio exceeds 1:1000 sf. (commercial)
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 square feet (commercial)
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 to 200 units, then one car share space per 200 units.
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required
Pedestrian crossing improvements	• Identified as an improvement within site analysis
Pedestrian-supportive signal changes[3]	• Identified as an improvement within operations analysis
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near side
Signal upgrades[4]	• Project size exceeds 100 residential units, 80,000 sf. of retail, or 100,000 sf. of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf. of retail, or 100,000 sf. of commercial; and

[1] Including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.

[2] May also provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

[3] Including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.

[4] Including typical traffic lights, pedestrian signals, bike actuated signals, transit-only signals.

Improvement	Required by code or when…
	• Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)

ATTACHMENT B: PROJECT CONSISTENCY WITH COMMUNITY PLAN OR ZONING, PER CEQA GUIDELINES SECTION 15183

Section 15183(a) of the California Environmental Quality Act (CEQA) Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

Further, Section 15183 states,

> (b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:
>
> > (1) Are peculiar to the project or the parcel on which the project would be located,
> >
> > (2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan or community plan with which the project is consistent,
> >
> > (3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or
> >
> > (4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.
>
> (c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (e) below, then an additional EIR need not be prepared for the project solely on the basis of that impact.

Section 15183 (f) states, "An effect of a project on the environment shall not be considered peculiar to the project or the parcel for the purposes of this section if uniformly applied development policies or standards have been previously adopted by the city or county with a finding that the development policies or standards will substantially mitigate that environmental

effect when applied to future projects, unless substantial new information shows that the policies or standards will not substantially mitigate the environmental effect."

Project

As discussed in *Chapter IV, Project Description*, above, the project would be located in developed, urbanized Downtown Oakland. The project would develop a 40-story, approximately 399.5-foot-high building with an additional 13.5 feet in mechanical. The project includes approximately 380,443 square feet of residential space, approximately 74,510 square feet of vehicle parking, approximately 42,592 square feet of open space, and 7,130 square feet for a lobby. It would demolish an existing surface parking lot and construct a new residential building with approximately 518,930 gross square feet.

Project Consistency

The City of Oakland completed an update of the General Plan Land Use and Transportation Element (LUTE) in March 1998. The LUTE includes the City's current Land Use and Transportation Diagram as well as strategies, policies, and priorities for Oakland's development and enhancement during a two-decade period. The EIR certified for the LUTE is used to simplify the task of preparing environmental documents on later projects that occur as a result of LUTE implementation.

Section 15183(a) of the CEQA Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

As discussed in detail in *Chapter II, Background-Program Plans and EIRs*, of this document, the analysis in the 1998 LUTE EIR is considered the qualified planning level CEQA documents for this assessment, pursuant to CEQA Guidelines Section 15183.

1998 General Plan Land Use and Transportation Element and EIR

As determined by the City of Oakland Bureau of Planning, the proposed land uses are permitted in the zoning district in which the project is located, making the project consistent with the bulk, density, and land uses envisioned for the project site, as outlined below.

- The General Plan land use designation for the site is Commercial Business District (CBD). This designation applies to areas suitable for high density mixed-use urban center with a mix of large-scale offices, commercial, urban (high-rise) residential, and infill hotel uses, among many others, in the central Downtown core of the city. The designation is intended to encourage, support, and enhance the downtown area as a high-density, mixed-use urban

center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The project would provide for office uses on the project site that would be pedestrian-oriented and be a hub for business.

- The site is zoned Commercial Business District Pedestrian Retail Commercial Zone (CBD-P). The CBD-P district is intended to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses while upper story spaces are intended to be available for a wide range of office and residential activities. The project would be consistent with both the intent of the General Plan and Zoning as it would develop a high-rise residential tower that would help the City further establish the area as a high-density, mixed-use urban center of regional importance. While the project would not provide any non-residential storefront use spaces on the ground floor would, it would provide a transparent façade to increase visibility into the building and would also provide residential uses on the upper story spaces.
- The proposed building would be up to approximately 399.5 feet in height with an additional 13.5 feet for mechanical rooftop screening and is within Height Area 7, which has no maximum height limit.
- The maximum non-residential FAR is 20:1; based on the project site size of approximately 20,974 square feet (approximately 0.48 acres), up to 419,480 square feet of floor area is allowed. The project would create a total of 401,828 gross square feet of floor area and therefore have a total FAR of 19.16.[1]
- In addition, there are no peculiar aspects of the project that would increase the severity of any of the previously analyzed environmental impacts in the 1998 LUTE EIR.
- The Project is consistent with the development goals in the Central District Urban Renewal Plan. The 2011 Renewal Plan Amendments EIR details particular projects and programs that are anticipated to include targeting investments and activities toward certain catalyst projects, infrastructure improvement projects and infill development projects that are consistent with the General Plan. The Project is consistent with at least four major goals of these project and programs:
    - Correcting health and safety concerns, improving economic conditions and eliminating physical blight conditions throughout the Redevelopment Project Area.
    - Improved environmental design within the Redevelopment Project Area, including creation of a definite sense of place, clear gateways, emphatic focal points and physical design which expresses and respects the special nature of each subarea.
    - Provision of adequate infrastructure such as public parking, sidewalks, and traffic control.

[1] Floor area square footage includes the total gross horizontal areas of all floors below the roof, excluding off-street parking areas and open spaces.

- Utilization of key transit nodes to support transit-oriented development.

New Significant Effects and Substantial New Information

The Project would not cause new specific effects that were not addressed in the 1998 LUTE EIR or the 2011 Renewal Plan Amendments EIR. The analysis of the Project in the CEQA Checklist analysis includes all the resource topics identified as potentially incurring significant unavoidable impacts and concludes that there would be no impacts that were not analyzed in Previous EIRs. As these analyses demonstrate, the Project would not substantially increase the severity of the impacts identified in the 1998 LUTE EIR or 2011 Renewal Plan Amendments EIR, nor would it result in new significant impacts that were not identified in these Previous EIRs.

Further, there have been no substantial changes in circumstances following certification of the Previous EIRs that would result in any new specific significant effects of the Project. There is no new information that was not known at the time the 1998 LUTE EIR or 2011 Renewal Plan Amendments EIR were certified that would cause more severe adverse impacts than discussed in the Previous EIRs. There have been no significant changes in the underlying development assumptions, nor in the applicability or feasibility of mitigation measures or SCAs included in the Previous EIRs.

ATTACHMENT C: INFILL PERFORMANCE STANDARDS, PER CEQA GUIDELINES SECTION 15183.3

California Environmental Quality Act (CEQA) Guidelines Section 15183.3(b) and CEQA Guidelines Appendix M establish eligibility requirements for projects to qualify as infill projects. Table C-1, on the pages following, shows how the project satisfies each of the applicable requirements.

Table C-1
Project Infill Eligibility

CEQA Eligibility Criteria		**Eligible? /Notes for Project**
1.	Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter. For the purpose of this subdivision, adjoin means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved right-of-way. (CEQA Guidelines Section 15183.3[b][1])	Yes The project site has been previously developed with a surface parking lot and adjoins existing urban uses, as described in *Chapter IV, Project Description*, above.
2.	Satisfy the performance Standards provided in Appendix M (CEQA Guidelines Section 15183.3[b][2]) as presented in 2a and 2b below:	—
	2a. *Performance Standards Related to Project Design.* All projects must implement **all** of the following:	—
	Renewable Energy. *Non-Residential Projects.* All nonresidential projects shall include on-site renewable power generation, such as solar photovoltaic, solar thermal, and wind power generation, or clean back-up power supplies, where feasible. *Residential Projects.* Residential projects are also encouraged to include such on-site renewable power generation.	Not Applicable The project is residential.
	Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code, or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air	Yes The proposed project would include residential units within 1,000 feet of existing stationary sources, major roadways, and proposed developments that could operate emergency diesel generators. However, as summarized in the health risk analysis, the existing and foreseeable future sources of air pollution within 1,000 feet of the project would not cause the excess cancer risk, chronic HI, and $PM_{2.5}$ concentrations at the project site to be greater than the City of Oakland's cumulative thresholds of significance. Therefore, no indoor air pollution reduction measures are required to be implemented for the proposed project.

Table C-1
Project Infill Eligibility

CEQA Eligibility Criteria		Eligible? /Notes for Project
	Resources Board, air districts, and the California Air Pollution Control Officers Association.	
	2b. *Additional Performance Standards by Project Type.* In addition to implementing all the features described in criterion 2a above, the project must meet eligibility requirements provided below by project type.[a]	
	Residential. A residential project must meet **one** of the following: A. *Projects achieving below average regional per capita vehicle miles traveled.* A residential project is eligible if it is located in a low vehicle travel area within the region; B. *Projects located within ½-mile of an Existing Major Transit Stop or High-Quality Transit Corridor.* A residential project is eligible if it is located within ½-mile of an existing major transit stop or an existing stop along a high-quality transit corridor; **or** C. *Low – Income Housing.* A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	Yes, satisfies A and B As described in *Section V.N, Transportation and Circulation,* the project site is located in a low vehicle travel area and is located approximately 0.1 miles away from the 12th Street BART Station.
	Commercial/Retail. A commercial/retail project must meet **one** of the following: A. *Regional Location.* A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a low vehicle travel area; **or** B. *Proximity to Households.* A project with no single-building floor-plate greater than 50,000 square feet located within ½-mile of 1,800 households is eligible.	Not Applicable
	Office Building. An office building project must meet **one** of the following: A. *Regional Location.* Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area; **or** B. *Proximity to a Major Transit Stop.* Office buildings, both commercial and public, within ½-mile of an existing major transit stop, or ¼-mile of an existing stop along a high-quality transit corridor, are eligible.	Not Applicable
	Schools. Elementary schools within 1 mile of 50 percent of the projected student population are eligible. Middle schools and high schools within 2 miles of 50 percent of the projected student population are eligible.	Not Applicable

Table C-1
Project Infill Eligibility

	CEQA Eligibility Criteria	Eligible? /Notes for Project
	Alternatively, any school within ½-mile of an existing major transit stop or an existing stop along a high-quality transit corridor is eligible. Additionally, to be eligible, all schools shall provide parking and storage for bicycles and scooters, and shall comply with the requirements of Sections 17213, 17213.1, and 17213.2 of the California Education Code.	
	Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not Applicable
	Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivisions (e)(6), that implement the project features in 2a above are eligible.	Not Applicable
3.	Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, **except** as provided in CEQA Guidelines Sections 15183.3(b)(3)(A) or (b)(3)(B) below: (b)(3)(A). Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75; **or** (b)(3)(B). Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a "small walkable community project" in CEQA Guidelines §15183.3(f)(5). (CEQA Guidelines Section 15183.3[b][3])	Yes (see explanation below table)

[a] Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this section that apply to the predominant use shall govern the entire project.

Explanation for Eligibility Criteria 3 – The adopted Plan Bay Area (2017)[1] serves as the Sustainable Communities' Strategy for the Bay Area, per SB 375. As defined by the Plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. The project is consistent with the land use designation, density, and building intensity specified in the General Plan as described in *Section V.J, Land Use, Plans, and Policies*, of this document and summarized below.

[1] Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2017. Plan Bay Area 2040, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area 2017-2040, July 26.

The General Plan land use designation for the site is Central Business District (CBD); this classification is intended to encourage, support, and enhance the downtown area as a high-density mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The project would provide a residential building in a heavily urbanized area with a variety of uses, further increasing Downtown's mix of uses.

The site is zoned Commercial Business District Pedestrian Retail Commercial Zone (CBD-P). The project would be consistent with the purposes of this the CBD-P district, which is intended to create, maintain, and enhance areas of the Central Business District for ground-level, pedestrian-oriented, active storefront uses while upper story spaces are intended to be available for a wide range of office and residential activities. The project would be consistent with both the intent of the General Plan and Zoning as it would develop a high-rise residential tower that would help the City further establish the area as a high-density, mixed-use urban center of regional importance. While the project would not provide any non-residential use spaces on the ground floor would, it would provide a transparent façade to increase visibility into the building and would also provide residential uses on the upper story spaces. The project site is also in Height Area 7, which has no height limit; however, towers above 250 feet in height require a conditional use permit. In Height Area 7, the maximum building base height is 85 feet and the minimum height of any new building is 45 feet. Furthermore, the maximum non-residential FAR is 20.0. Based on the maximum density and FAR, up to 419,480 square feet uses are allowed on the 0.48-acre project site.

The project would result in the development of a 40-story building that would include primarily residential uses. The proposed building would have a base height of 60 feet, which would be above the minimum base height and below the maximum base height, and a tower height of up to 399.5 feet plus mechanical 13.5 feet for rooftop screening. The project would also have a FAR of 19.16, with a total of 401,828 FAR-considerable floor area. As such, the project would be consistent with the General Plan, zoning code, and density and intensity requirements.

ATTACHMENT D: URBAN INFILL EXEMPTION ANALYSIS, PER CEQA GUIDELINES SECTION 15332

Article 19 of CEQA Guidelines Section, 15300 to Section 15333, includes a list of classes of projects that have been determined to not have a significant effect on the environment and as a result are exempt from review under CEQA. Among the classes of projects that are exempt from CEQA review are those projects that are specifically identified as urban in-fill development. CEQA Guidelines Section 15332 (Class 32) consists of projects characterized as in-fill development when meeting the following conditions:

- The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations
- The proposed development occurs within city limits, on a project site of no more than five acres, substantially surrounded by urban uses
- The project site has no value as habitat for endangered, rare of threatened species
- Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality, and
- The site can be adequately served by all required utilities and public services.

The analysis presented in the following section provides substantial evidence that the project qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban in-fill development, would not have a significant effect on the environment, and there are no exceptions to the CEQA exemption.

Table D-1
Project Infill Exemption Analysis

	CEQA Eligibility Criteria	**Eligible? / Notes for Project**
1.	**General Plan and Zoning Consistency (CEQA Guidelines Section 15332[a]):** The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.	Yes As is fully documented above in both *Section V.J, Land use, Plans, and Policies*, and in Attachment B, the project is consistent with the applicable General Plan LUTE and its implementing policies, the Central District Urban Renewal Plan, and the applicable regulatory standards of the CBD-P zoning district.
2.	**Project Location, Size, and Context (CEQA Guidelines Section 15332[b]):** The proposed development occurs within city limits, on a project site of no more than five acres, substantially surrounded by urban uses.	Yes The approximately 0.48-acre (20,974 square feet) project site is located within the Oakland city limits, and within an urbanized portion of Downtown Oakland. The project site is surrounded on all sides by urban land uses.
3.	**Endangered, Rare, or Threatened Species (CEQA Guidelines Section 15332[c]):** The project site has no	Yes As documented above in *Section V.C, Biological Resources*, the project site consists of a surface parking lot and is surrounded

Table D-1
Project Infill Exemption Analysis

CEQA Eligibility Criteria		Eligible? / Notes for Project
	value as habitat for endangered, rare of threatened species	on all sides by urban development. There is no vegetation in site or in proposed for removal. The site provides virtually no habitat for any significant plants or animals. Therefore, the project site has no value as habitat for endangered, rare, or threatened species.
4.	**Traffic (CEQA Guidelines Section 15332[d][1]):** Approval of the project would not result in any significant effects relating to traffic	Yes As documented above in *Section V.N, Transportation and Circulation*, the project would not exceed any of the City's applicable significance thresholds related to traffic and transportation and any potential impacts would be further reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • Implementation of SCA-TRANS-1: Transportation and Parking Demand Management (#77) • SCA-TRANS-2: Construction Activity in the Public Right-of-Way (#74) • SCA-TRANS-3: Bicycle Parking (#75) • SCA-TRANS-4: Transportation Improvements (#76) • SCA-TRANS-5: Transportation Impact Fee (#78) • SCA-TRANS-6: Plug-In Electric Vehicle Charging Infrastructure (#80) With implementation of all required SCAs, the project would not result in any significant effects related to traffic or transportation.
5.	**Noise (CEQA Guidelines Section 15332[d][2]):** Approval of the project would not result in any significant effects relating to noise	Yes As documented above in *Section V.K, Noise*, the project could exceed some of the City's applicable significance thresholds related to noise and vibration, but all potential impacts would be reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • SCA-NOI-1: Construction Days/Hours (#61) • SCA-NOI-2: Construction Noise (#62) • SCA-NOI-3: Extreme Construction Noise (#63) • SCA-NOI-4: Construction Noise Complaints (#65) SCA-NOI-5: Operational Noise (#67) SCA-NOI-6: Exposure to Community Noise (#66) • SCA-NOI-7: Vibration Impacts on Adjacent Structures or Vibration-Sensitive Activities (#69) With implementation of all required SCAs, the project would not result in any significant effects related to noise or vibration.
6.	**Air Quality (CEQA Guidelines Section 15332[d][3]):** Approval of the project would not result in any significant effects relating to air quality	Yes As documented above in *Section V.B, Air Quality*, the project could exceed some of the City's applicable significance thresholds related to air quality, but all potential impacts would be reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs):

Table D-1
Project Infill Exemption Analysis

CEQA Eligibility Criteria		Eligible? / Notes for Project
		• SCA-AIR-1: Criteria Air Pollutant Controls – Construction Related (#21) • SCA-AIR-2: Dust Controls – Construction Related (#20) • SCA-AIR-3: Asbestos in Structures (#26) • SCA-AIR-4: Diesel Particulate Matter Controls – Construction Related (#22) • SCA-AIR-5: Stationary Sources of Air Pollution (Toxic Air Contaminants) (#24) • SCA-AIR-6: Exposure to Air Pollution (Toxic Air Contaminants) (#23) With implementation of all required SCAs, the project would not result in any significant effects related to air quality.
7.	**Water Quality (CEQA Guidelines Section 15332[d][4]):** Approval of the project would not result in any significant effects relating to water quality	Yes As documented above in *Section V.I, Hydrology and Water Quality*, the project would not exceed any of the City's applicable significance thresholds related to water quality and any potential impacts would be further reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43) • SCA-HAZ-2: Hazardous Materials Related to Construction (#42) • SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction (#48) • SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects (#53) With implementation of all required SCAs, the project would not result in any significant effects related to water quality.
8.	**Utilities and Public Services (CEQA Guidelines Section 15332[e]):** The site can be adequately served by all required utilities and public services	Yes As documented above in *Sections V.E, Energy; V.M, Public Services, Parks, and Recreation Facilities; and V.O, Utilities and Services*, the project would be adequately services by all needed utilities and all required public services. Furthermore, the project would not exceed any of the City's applicable significance thresholds related to utilities and public services and all impacts would be further reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • SCA-PS-1: Capital Improvements Impact Fee (#72) • SCA-UTIL-1: Sanitary Sewer System (#86) • SCA-UTIL-2: Storm Drain System (#87) • SCA-UTIL-3: Recycling Collection and Storage Space (#83) • SCA-UTIL-4: Construction and Demolition Waste Reduction and Recycling (#81) • SCA-UTIL-5: Underground Utilities (#82) • SCA-UTIL-6: Green Building Requirements (#84) • SCA-UTIL-7: Water Efficient Landscape Ordinance (WELO) (#92)

Table D-1 **Project Infill Exemption Analysis**		
CEQA Eligibility Criteria		**Eligible? / Notes for Project**
		With implementation of all required SCAs, the project would not result in any significant effects related to utilities and public services.

Exceptions to Categorical Exemptions Checklist

In addition to investigating the applicability of CEQA Guidelines Section 15332 (Class 32), this environmental review document also assesses whether any of the exceptions to qualifying for the Class 32 categorical exemption for an Infill Project are present. The following analysis in Table D-2 compares the criteria of CEQA Guidelines Section 15300.2 (Exceptions) to the project.

Table D-2 **Project Infill Exceptions**		
CEQA Eligibility Criteria		**Eligible? / Notes for Project**
1.	**Location (CEQA Guidelines Section 15300.2[a]):** Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.	No The project is not located in a particularly sensitive environment and would not impact any environmental resources of hazardous or critical concern as designated, mapped or adopted pursuant to law by federal, state, or local agencies. Further, this exception is not applicable to the Class 32 exemption.
2.	**Cumulative Impact (CEQA Guidelines Section 15332[b]):** All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant	No The project is consistent with the Land Use and Transportation Element (LUTE) of the General Plan, the Central District Urban Renewal Plan, and all applicable zoning regulations and is required to implement all applicable mitigation measures and SCAs identified in those documents' respective Environmental Impact Reports (EIR) pursuant to CEQA Guidelines Section 15183. Consistent with CEQA Guidelines Section 15183, which allows for streamlined environmental review, this environmental review document need not re-consider cumulative effects already addressed under these EIRs. As addressed ion the project's CEQA checklist under the topics of historic resources, traffic, noise, and air quality, the project's potential effects are assessed in relation to the combined cumulative effects of other approved, pending, and reasonably foreseeable future projects of generally the same type, and in the same general vicinity as the project. As concluded in the CEQA Checklist, the project would not make a considerable contribution to any cumulative effects related to traffic, noise, water quality, or air quality. The project would be required to implement applicable City SCAs, which would serve to reduce the project's construction to cumulative effects to less than significant. Since the project

Table D-2
Project Infill Exceptions

CEQA Eligibility Criteria		Eligible? / Notes for Project
		is consistent with the development assumed in the LUTE and Central District EIRs, the project's potential contribution to cumulative significant effects has already been addressed in the EIR, there are no further cumulative effects associated with the project, and an exception under CEQA Guidelines Section 15300.2(b) does not apply to the project.
3.	**Significant Effect Due to Unusual Circumstances (CEQA Guidelines Section 15300.2[c]):** A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances	No As analyzed throughout the CEQA Checklist, the project would not result in any significant effects in the environment. There are no unusual circumstances specific to the project as compared to its surroundings, or to other similar projects that would pose a reasonable possibility of casing a significant effect on the environment.
4.	**Scenic Highway (CEQA Guidelines Section 15300.2[d]):** A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.	No As documented above in *Section V.A, Aesthetics, Shadow, and Wind*, the project site is approximately 1.25 miles south of the State Scenic Highways segment of I-580 that terminates at State Route (SR) 24. Because the I-580/SR-24 interchange is elevated and the project would be one of the tallest developments in Downtown Oakland, it would be visible to motorists on the designated scenic highway. However, the project is not expected to damage view of scenic resources for motorists on I-580/SR-24 because its size and scale would not substantially interfere with the view from the I-580/SR 24 interchange.
5.	**Hazardous Waste Sites (CEQA Guidelines Section 15300.2[e]):** A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code	No As documented above in *Section V.H, Hazards and Hazardous Materials*, the project site is not included on any of the lists of hazardous materials release sites compiled in accordance with Government Code Section 65962.5, also known as the "Cortese List". The Phase I ESA found no environmental concerns at the project site and indicated that there is no available information to suggest that the project site has been adversely impacted by historic uses. Furthermore, the project would not exceed any of the City's applicable significance thresholds related to hazards and hazardous materials and all impacts would be further reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • SCA-HAZ-1: Hazardous Building Materials and Site Contamination (#43) • SCA-HAZ-2: Hazardous Materials Related to Construction (#42) • SCA-AIR-3: Asbestos in Structures (#26) With implementation of all required SCAs, the project would not result in any significant effects related to hazards and hazardous materials.
6.	**Historical Resources (CEQA Guidelines Section 15300.2[f]):** A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource	No As documented above in *Section V.D, Cultural and Historic Resources*, the project would be located within the Central Downtown Area of Primary Importance. However, development of the project would not result in any significant

Table D-2
Project Infill Exceptions

CEQA Eligibility Criteria		**Eligible? / Notes for Project**
		cultural resources impacts. Furthermore, the project would not exceed any other of the City's applicable significance thresholds related to cultural resources and any potential impacts would be further reduced to a less-than-significant level with implementation of SCAs (please see Attachment A for a full description of the applicable SCAs): • SCA-HIST-1: Archaeological and Paleontological Resources – Discovery During Construction (#32) • SCA-HIST-2: Human Remains – Discovery During Construction (#34) With implementation of all required SCAs, the project would not result in any significant effects related to cultural resources.

ATTACHMENT E: SHADOW STUDY

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Summer Solstice

A1-P

LEGEND

- Proposed Project (2022 Design)
- Existing/Current Shadows
- New Shading by Project
- Solar Collectors

Parks and Open Spaces

1. Frank Ogawa Plaza
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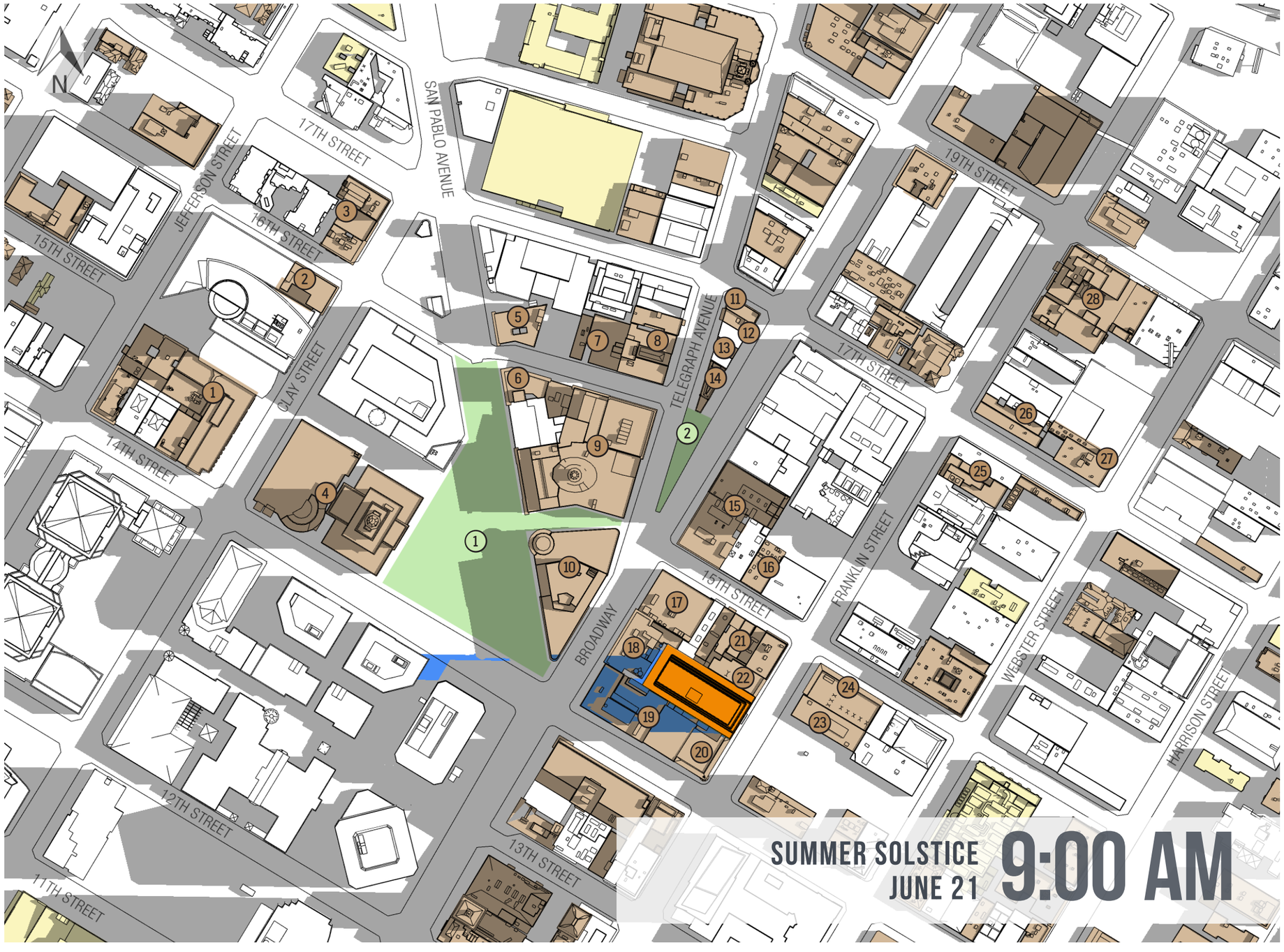

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Summer Solstice

A2-P

LEGEND

- Proposed Project (2022 Design)
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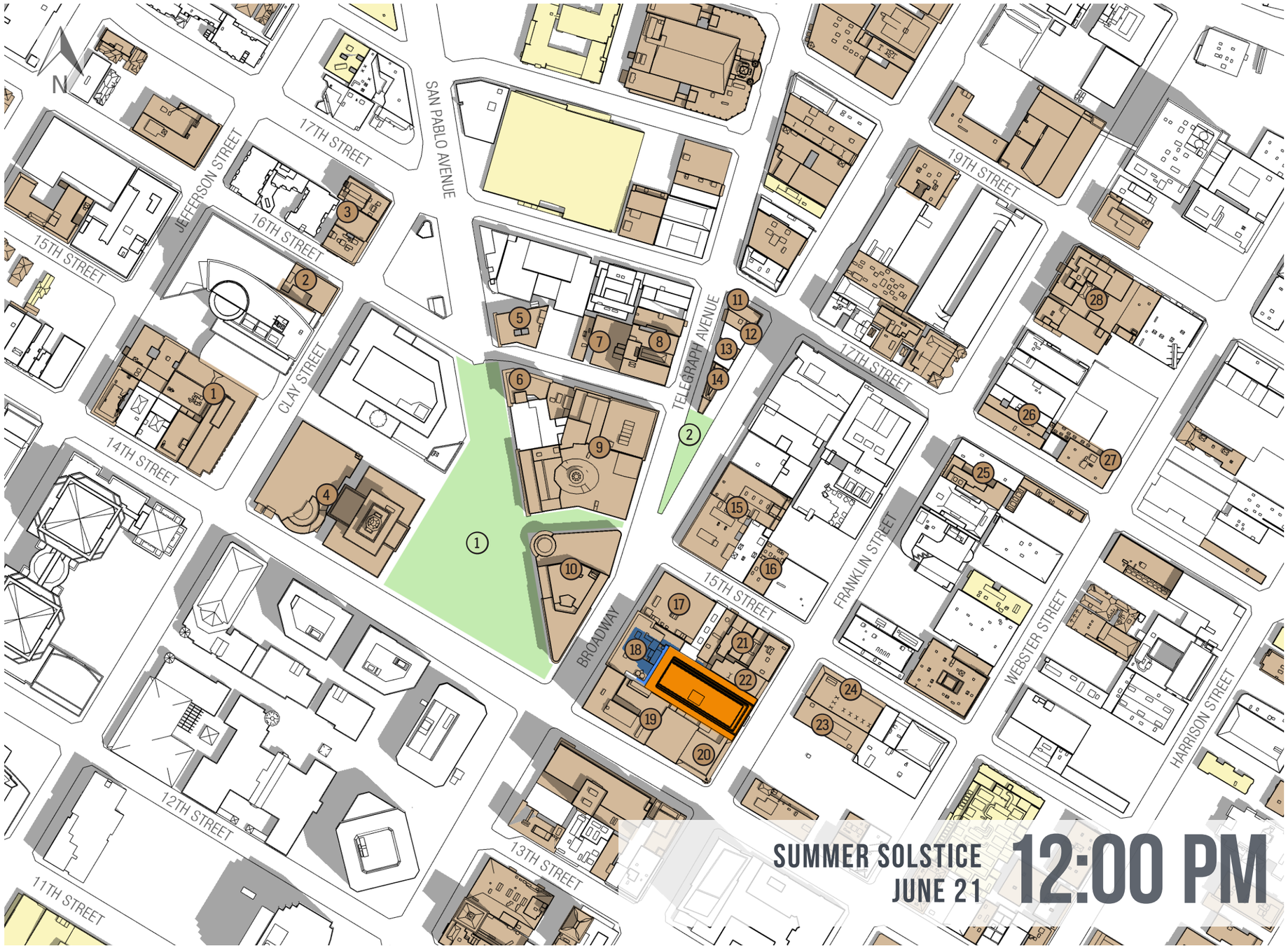

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Summer Solstice

A3-P

LEGEND

- Proposed Project (2022 Design)
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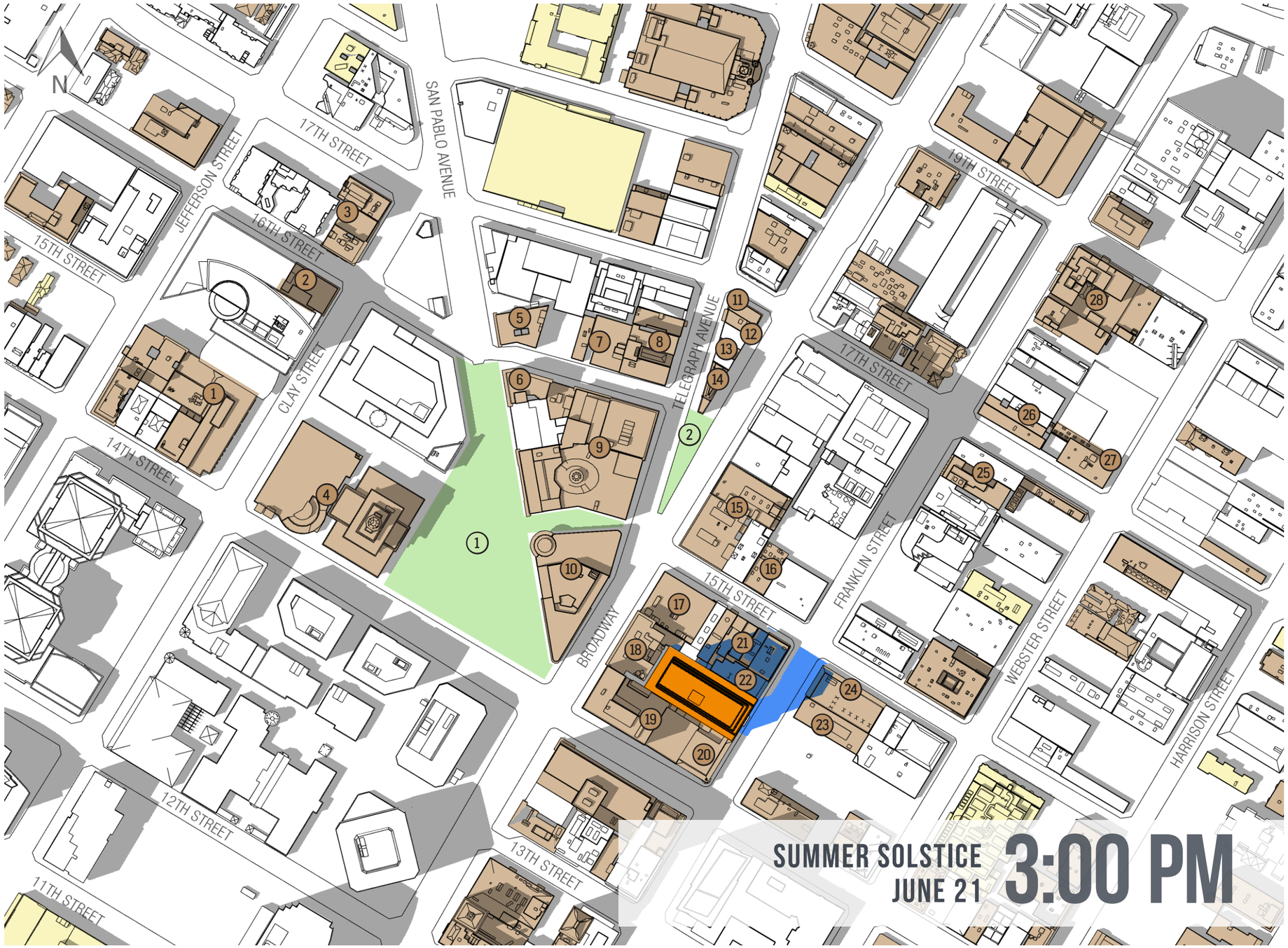

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Vernal/Autumnal Equinoxes

B1-P

LEGEND

- Proposed Project (2022 Design)
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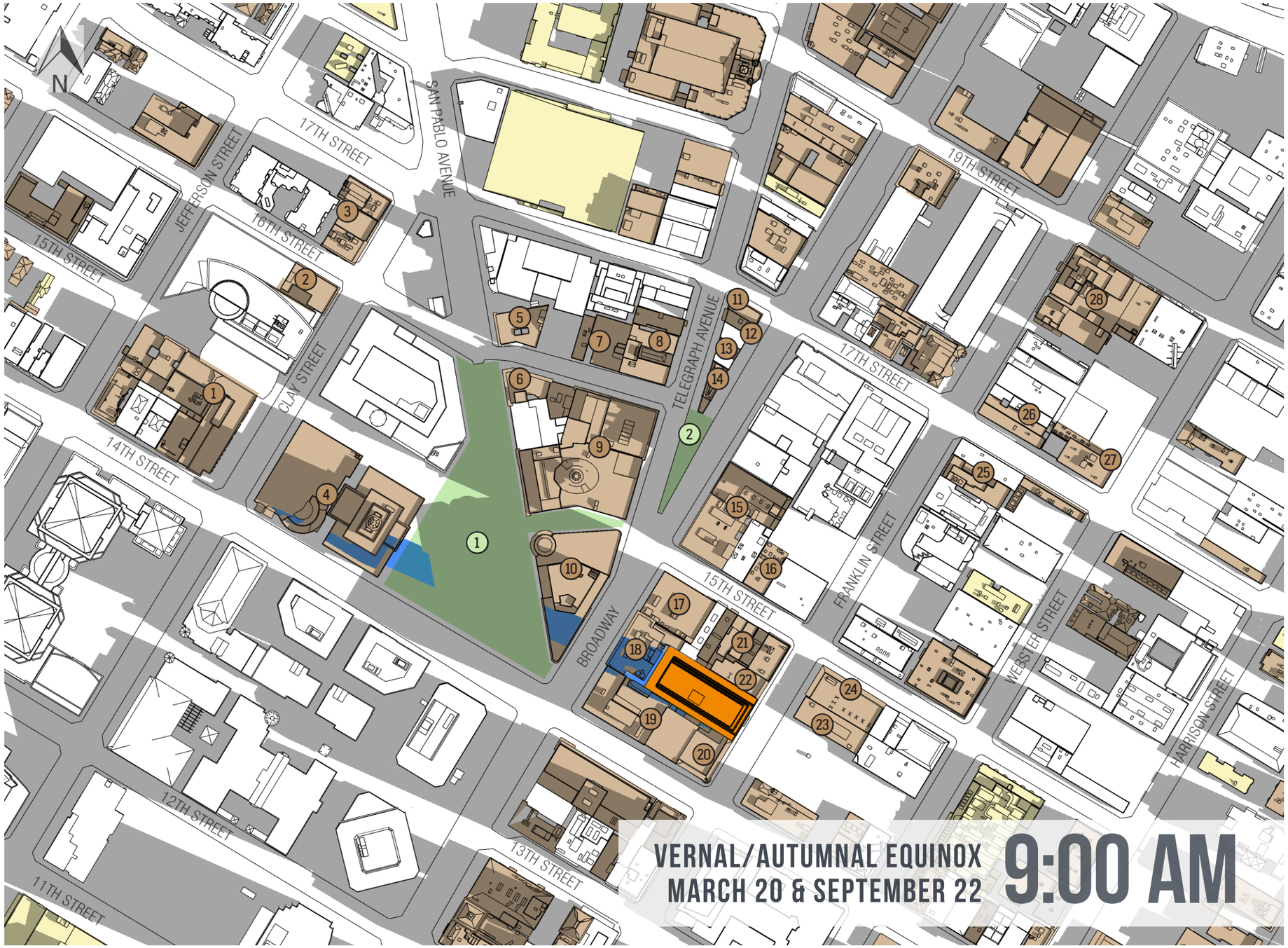

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Vernal/Autumnal Equinoxes

B2-P

LEGEND

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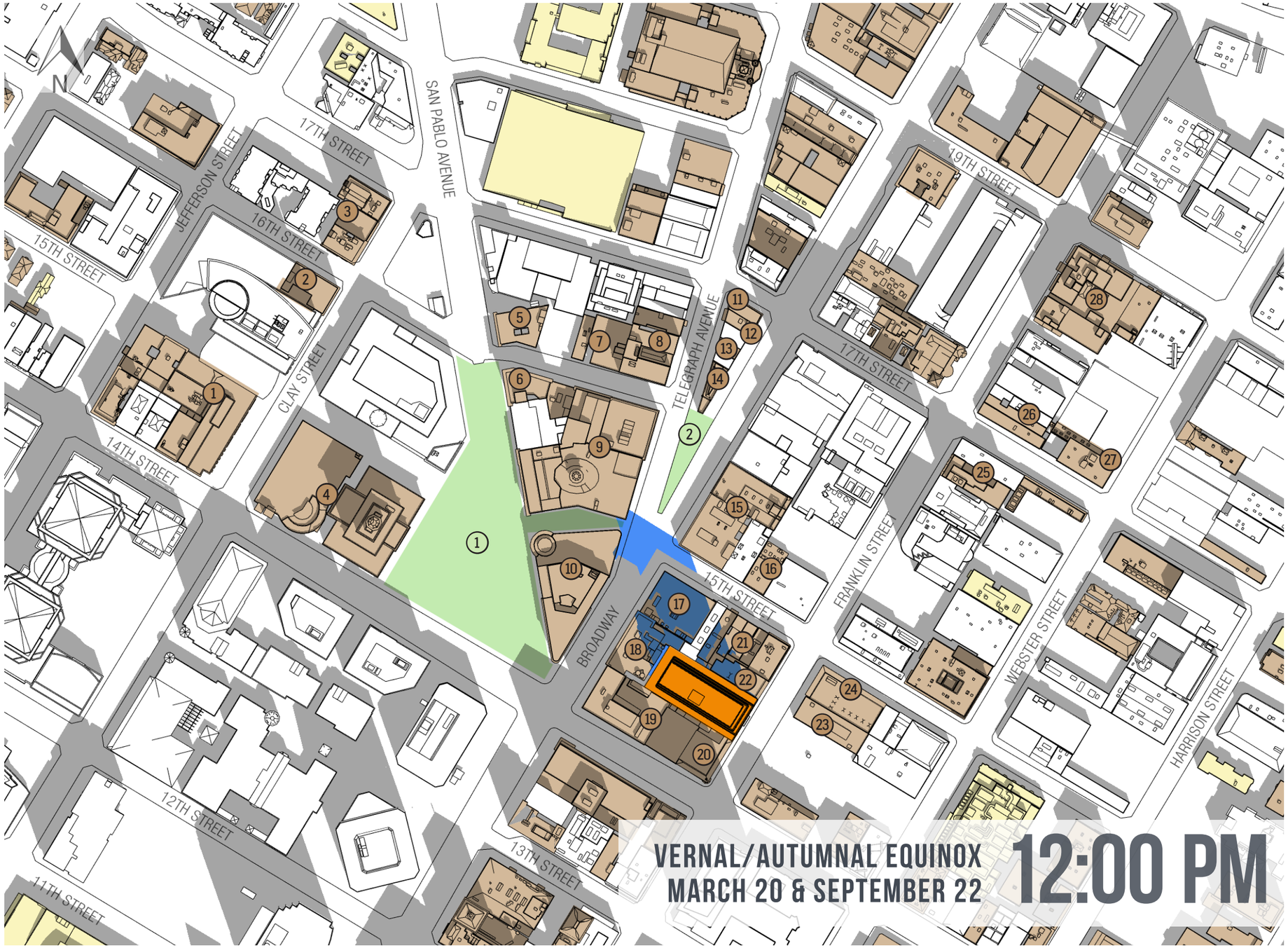

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Vernal/Autumnal Equinoxes

B3-P

LEGEND

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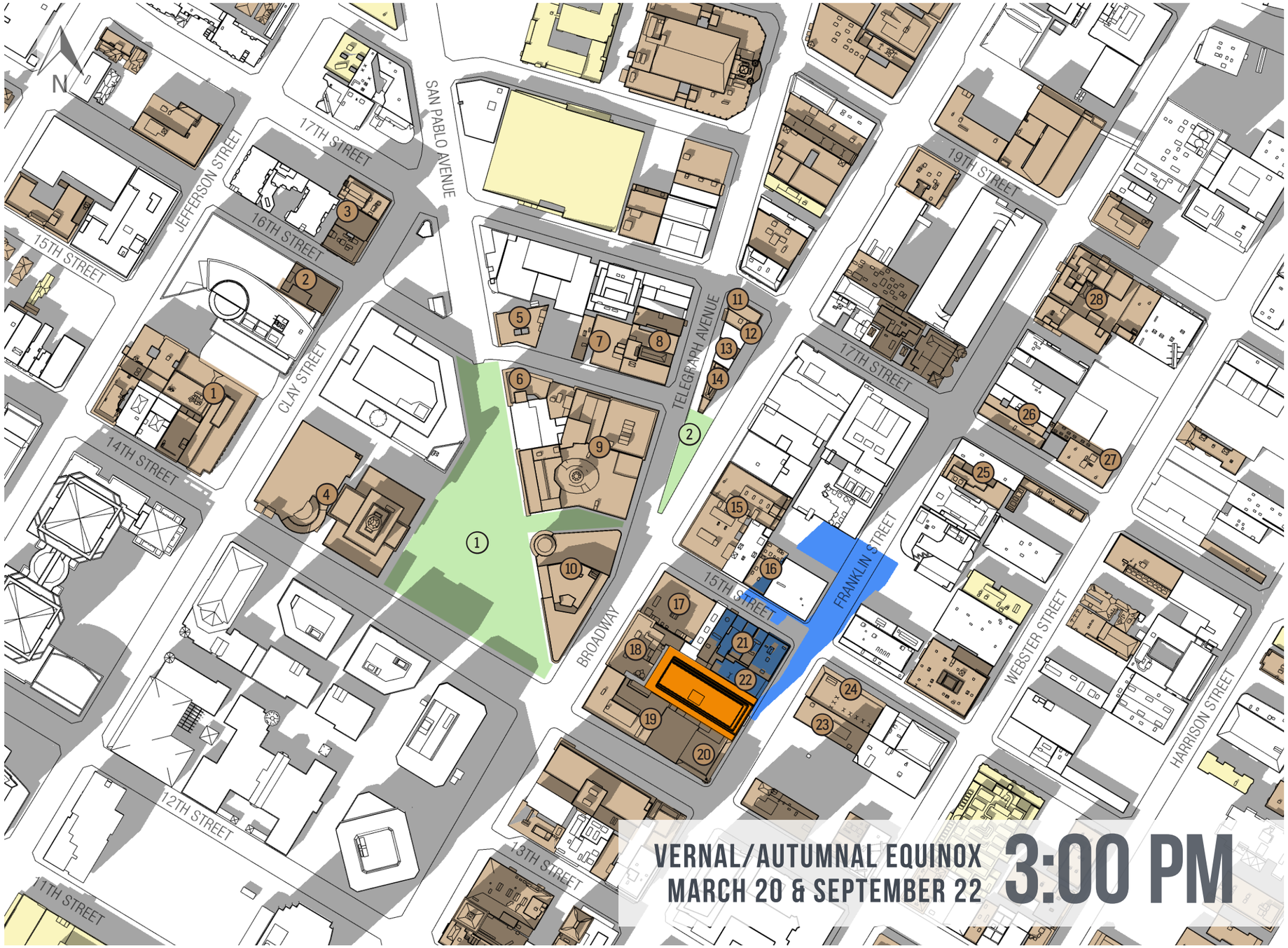

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Winter Solstice

C1-P

LEGEND

- Proposed Project (2022 Design)
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PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Shading diagrams on the Winter Solstice

C2-P

LEGEND

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PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

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C3-P

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PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Summer Solstice

A1-C

LEGEND

- Proposed Project (2022)
- Existing/Current Shadows
- New Shading by Project
- New Cumulative Shadows
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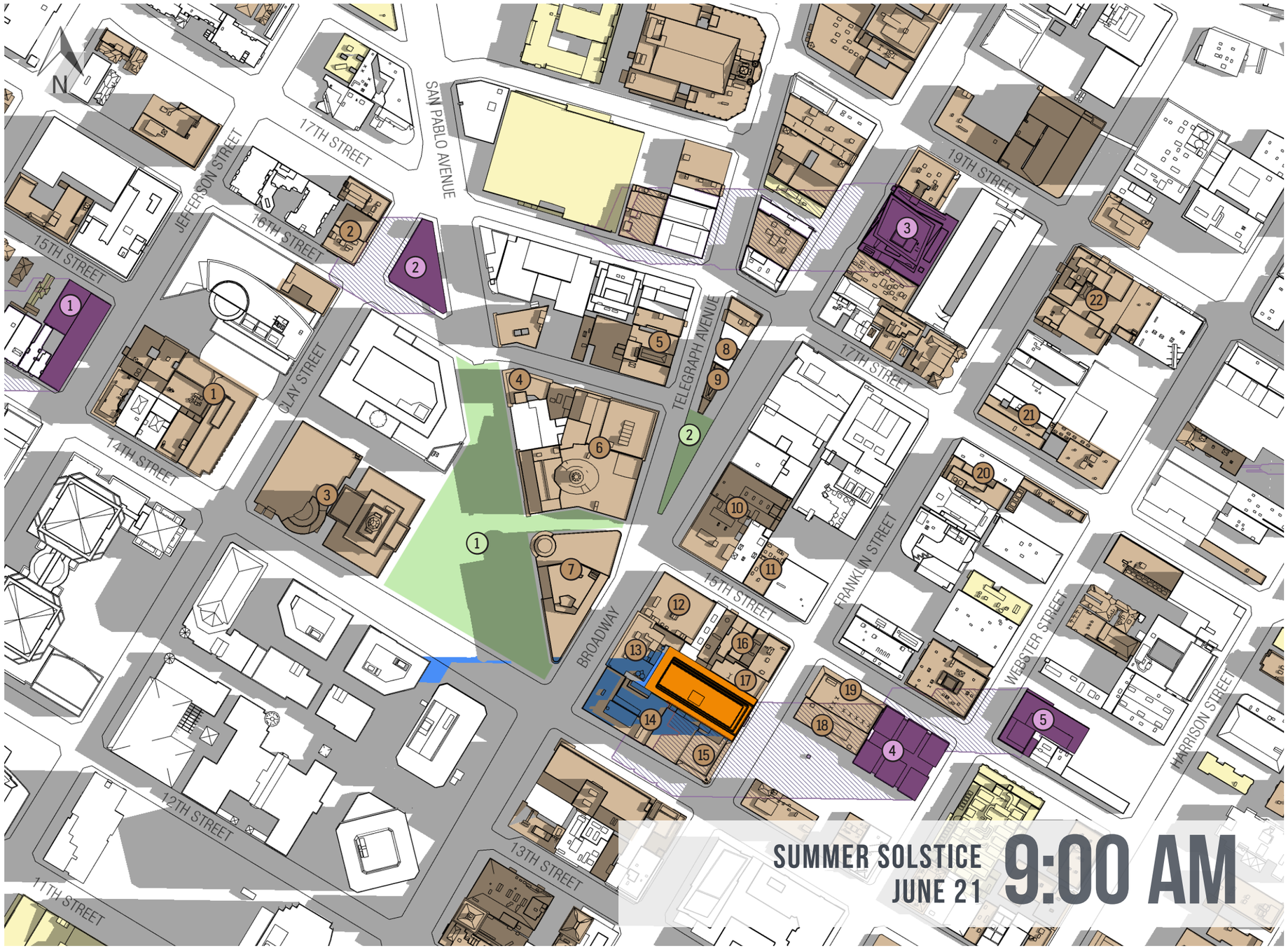

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

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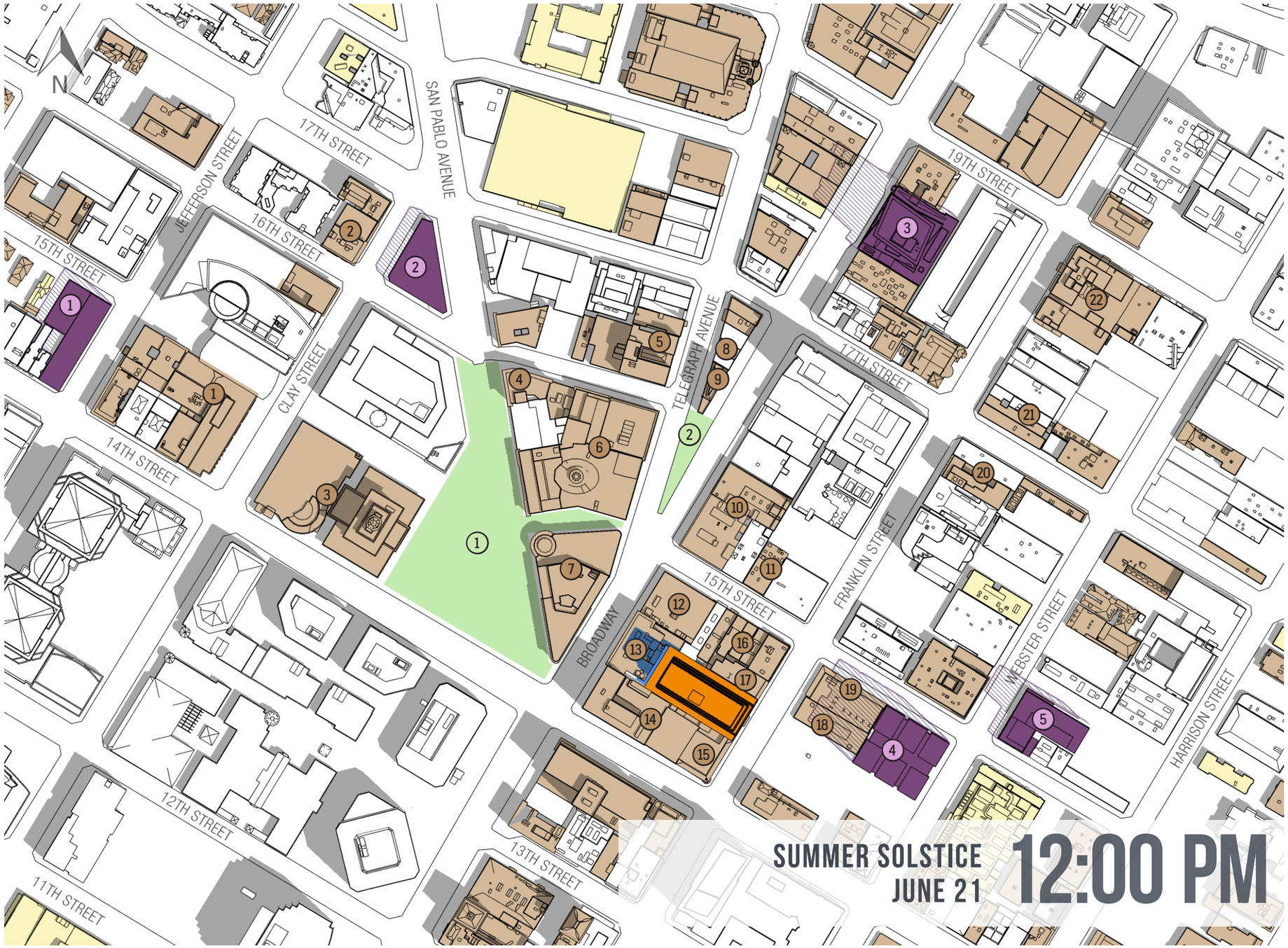

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Summer Solstice

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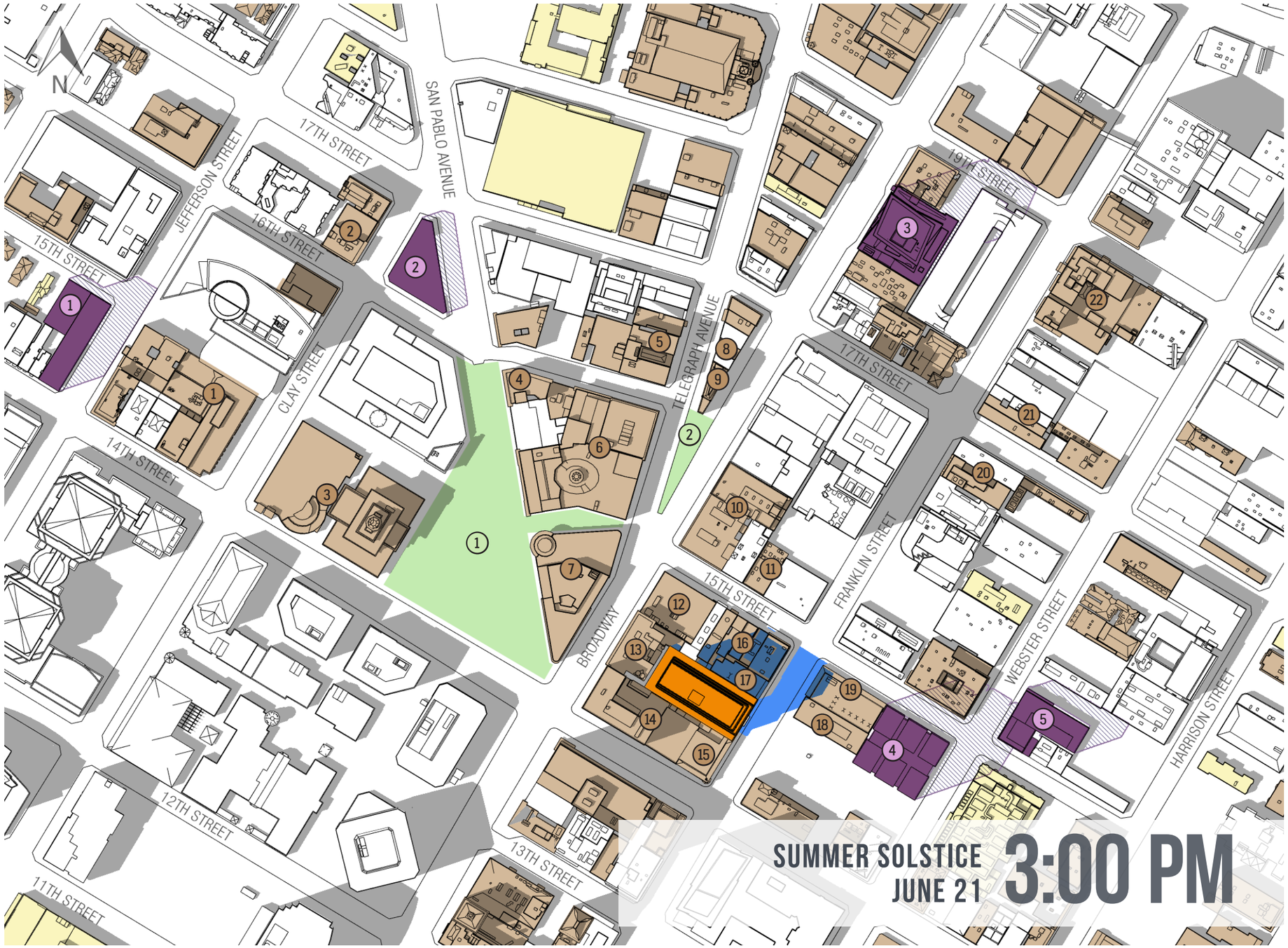

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

B1-C

LEGEND

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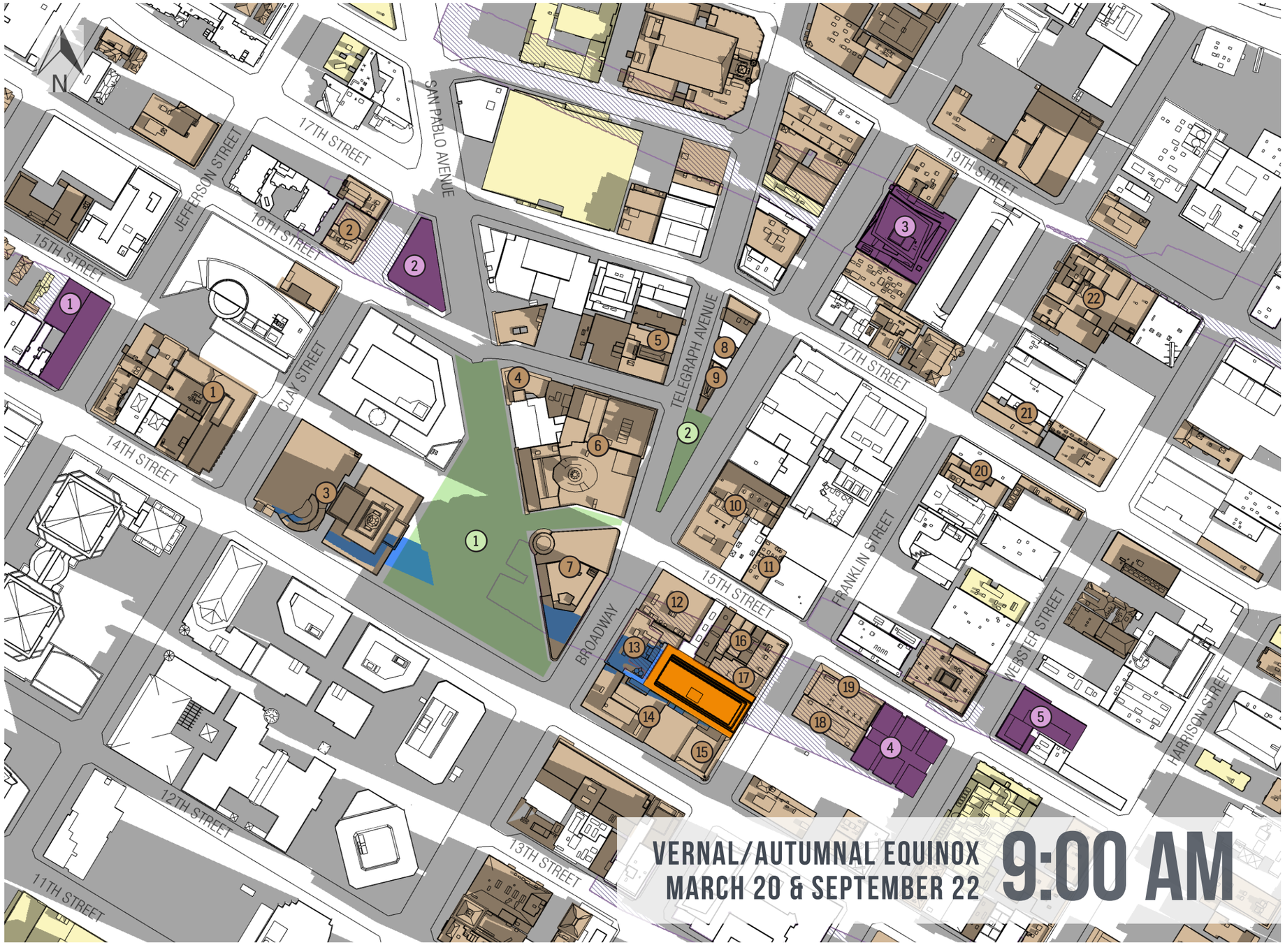

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

B2-C

LEGEND

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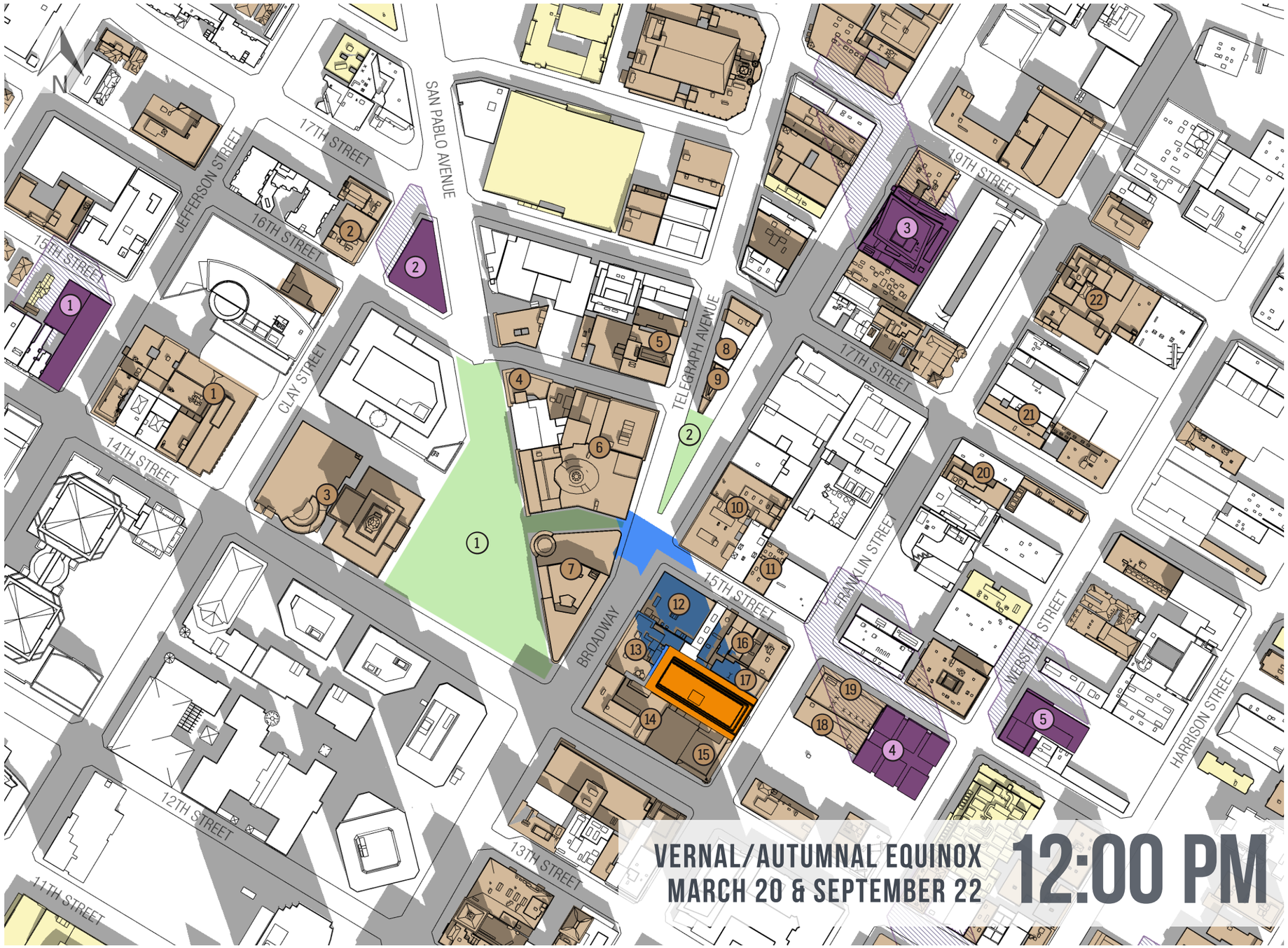

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Vernal/Autumnal Equinoxes

B3-C

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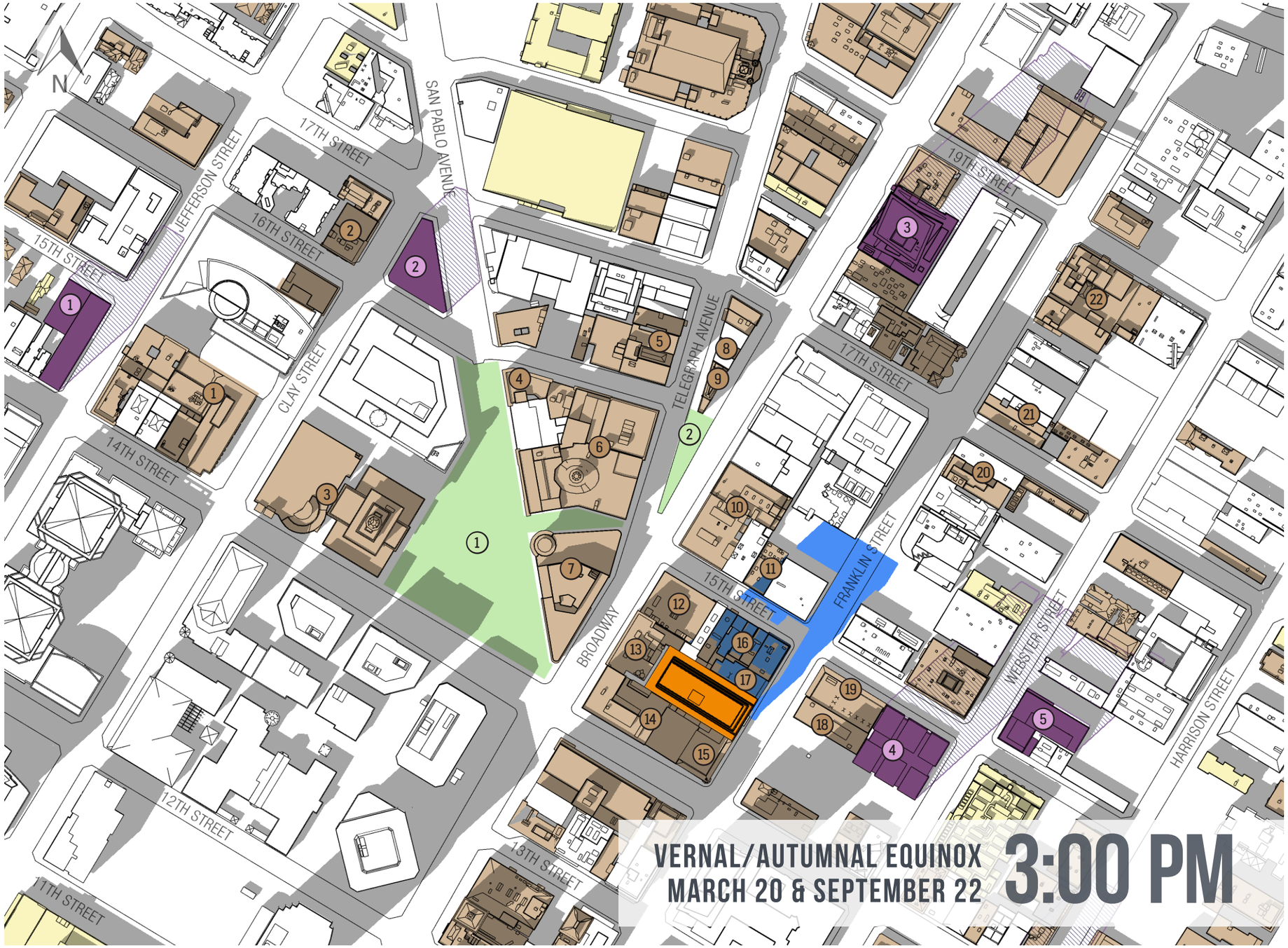

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Winter Solstice

C1-C

LEGEND

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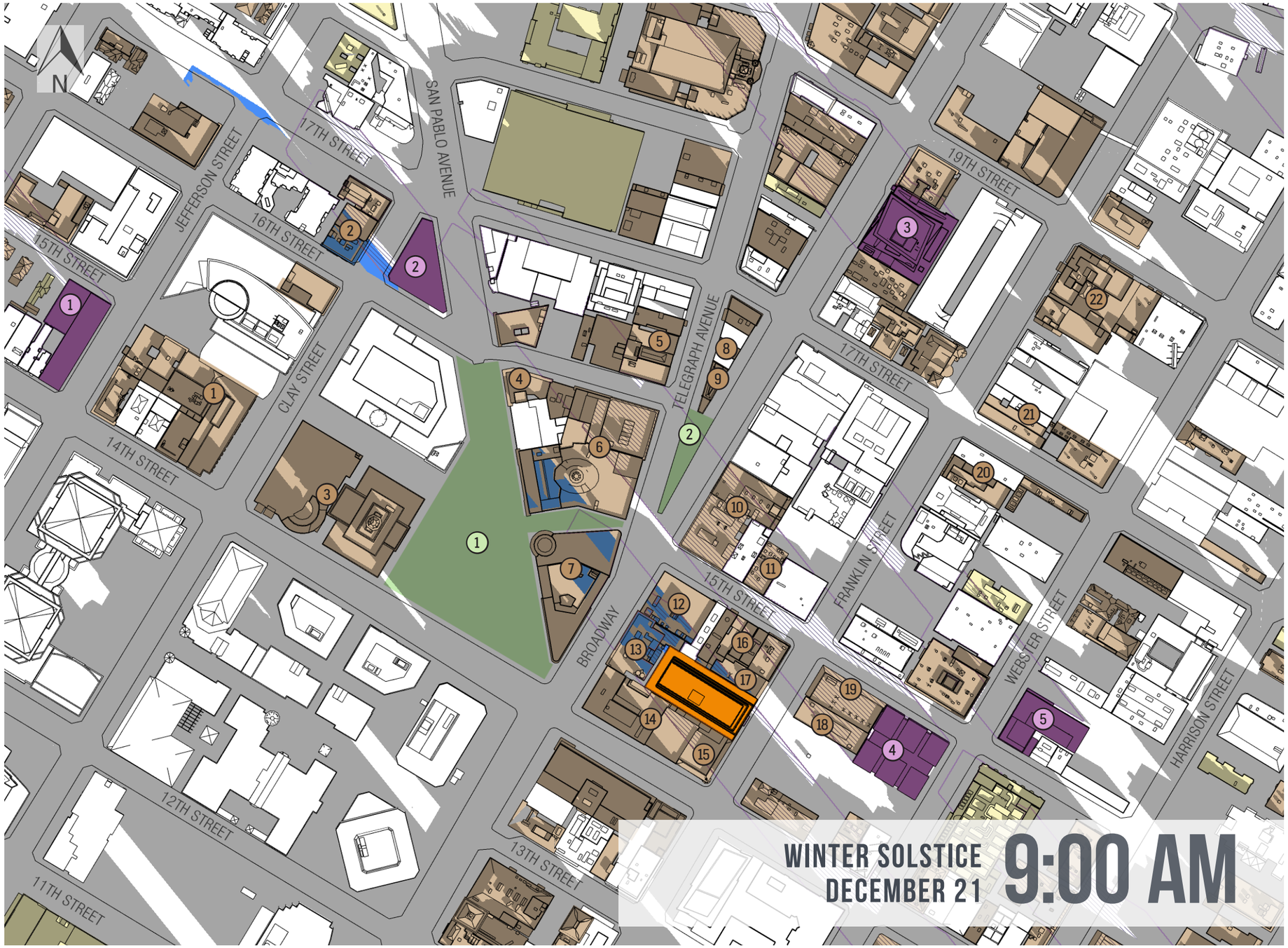

PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Winter Solstice

C2-C

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PREVISION DESIGN

1431 FRANKLIN STREET: RESIDENTIAL SCENARIO

Cumulative shading diagrams on the Winter Solstice

C3-C

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ATTACHMENT F: WIND STUDY AND LETTER OF OPINION

PRELIMINARY RESULTS

1431 FRANKLIN STREET

OAKLAND, CA

PEDESTRIAN WIND STUDY
RWDI # 2002586
September 11, 2020

SUBMITTED TO

Brandon Northard
borthart@up-partners.com

Urban Planning Partners, Inc.
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Oakland, CA 94612
T: 510.251.8210

SUBMITTED BY

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600 Southgate Drive
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F: 519.823.1316

EXECUTIVE SUMMARY

RWDI was retained to conduct a pedestrian wind assessment for the proposed 1431 Franklin Street development in Oakland, CA (Image 1). Based on our wind-tunnel testing for the two designs of the proposed development (residential and office) under the Existing, Existing + Project, and Project + Cumulative configurations (Images 2A through 2E), and the local wind records (Image 3), the potential wind hazard and comfort conditions are predicted as shown on site plans in Figures 1A through 2E, while the associated wind speeds are listed in Tables 1 and 2. These results can be summarized as follows:

- Overall, the addition of the proposed project is not expected to have a notable impact on the existing wind hazard and comfort conditions on and around the site. This is due to the long axis of the project being parallel to the predominant local winds and also the project being attached to the its north, south and west neighbour buildings.

- The two proposed designs of the project, office and residential, are similar in height and general geometry. Thus, their wind impact is predicted to be similar.

Wind Hazard Conditions:

- For the existing configuration (without the project), wind speeds at all locations are anticipated to comply with the wind hazard criterion.

- With the addition of the proposed building to the site (existing + project configuration), and the future buildings (project + cumulative configuration), wind speeds at all locations are expected to meet the wind hazard criterion for both the office and residential designs.

Wind Comfort Conditions:

- Wind speeds at 5 locations in the existing configuration (without the project) are expected to exceed the comfort criterion.

- For the existing + project configurations, wind conditions are expected to be generally similar to the existing winds, with wind speeds exceeding the comfort criteria at 6 locations for both the office and residential designs.

- For the project + cumulative configurations, wind conditions are expected to exceed the comfort criterion at 7 locations for both the office and residential designs.

While referring to the Pedestrian Wind Criteria description that follows, we encourage the design team to review the results and assess them against the intended pedestrian usage at specific locations. If there are locations where improved conditions are desired, the RWDI team is prepared to discuss and suggest conceptual wind control strategies. Additional commentary regarding background on wind flow patterns, wind comfort levels, and any further recommendations for wind control measures to help moderate wind activity in areas of high wind activity will be presented within the final report. Prior to issuing we recommend a teleconference session to review the results and discuss the types/locations/feasibilities of possible wind control measures.

Image 1: Aerial View of the Project Site and Surroundings (Photo Courtesy of Google™ Earth)

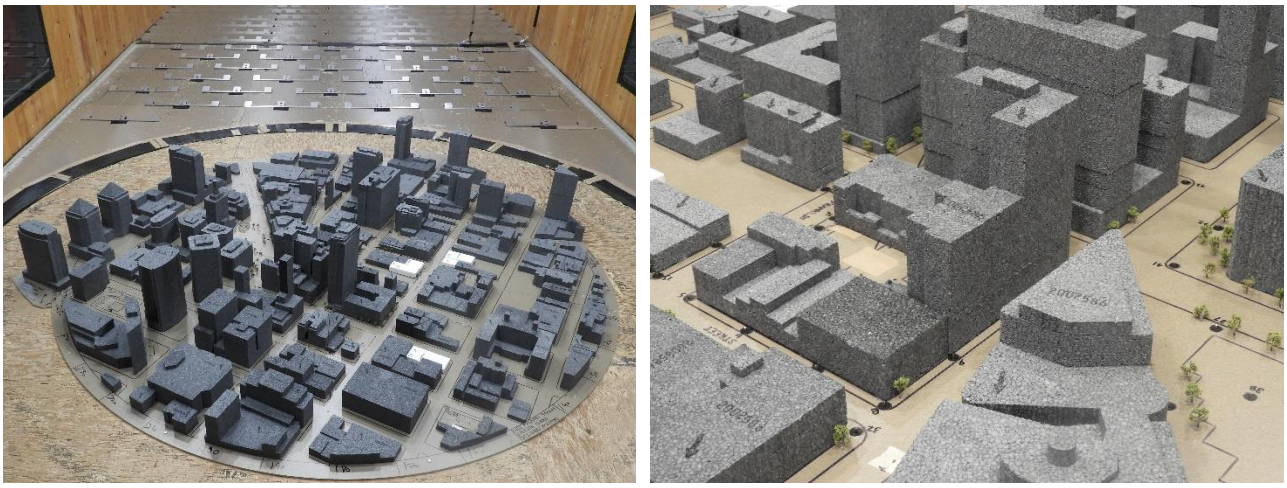


Image 2A: Wind Tunnel Study Model – Existing Configuration

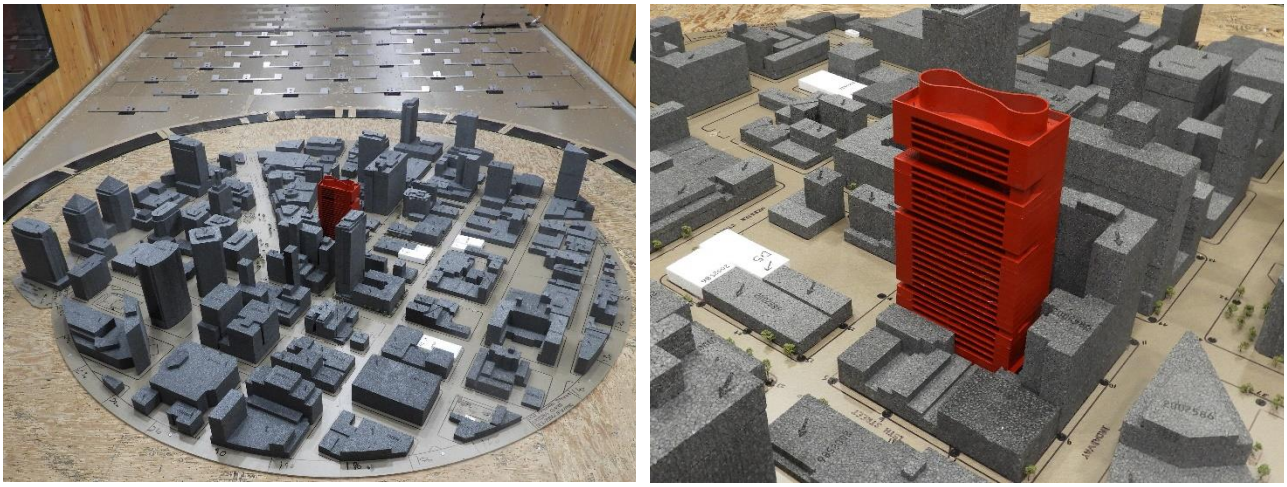


Image 2B: Wind Tunnel Study Model – Existing + Project (Office) Configuration

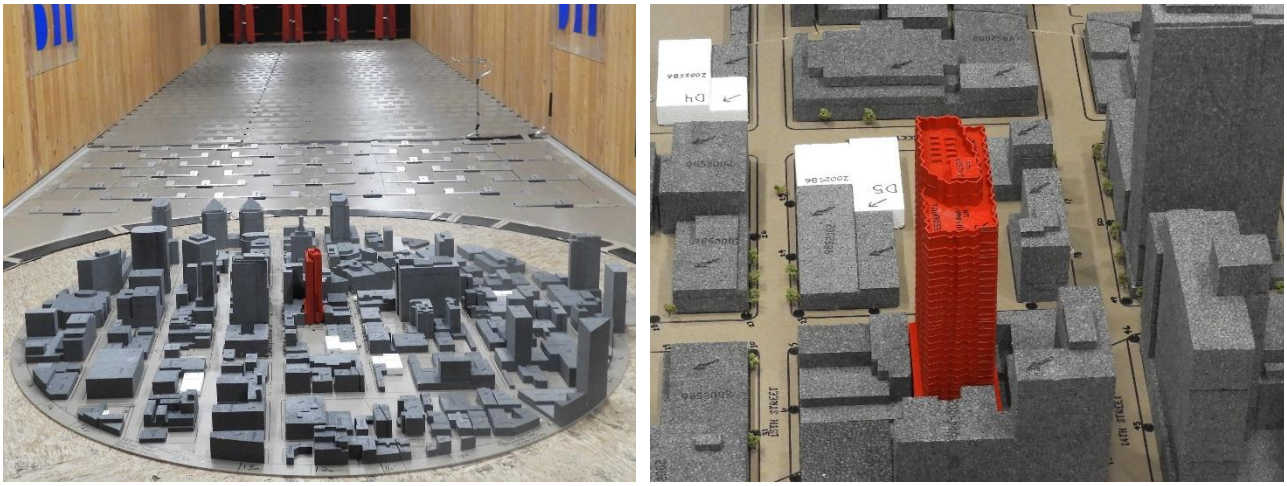


Image 2C: Wind Tunnel Study Model – Existing + Project (Residential) Configuration

Image 2D: Wind Tunnel Study Model – Project (Office) + Cumulative Configuration

Image 2E: Wind Tunnel Study Model – Project (Residential) + Cumulative Configuration

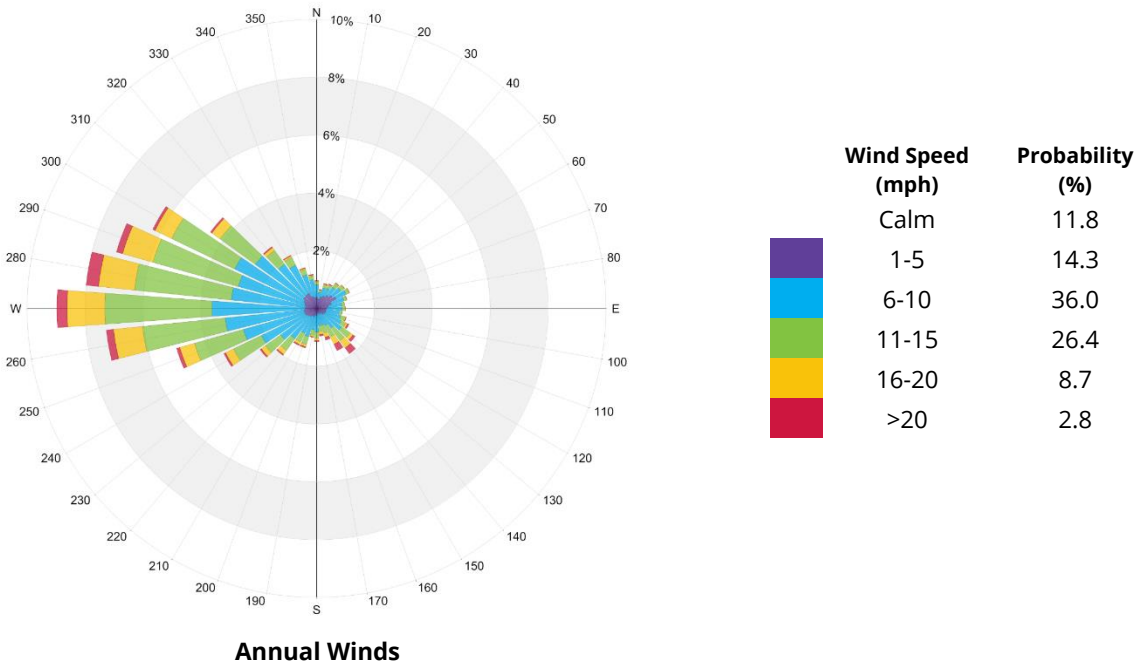


Image 3: Directional distribution of winds approaching Metropolitan Oakland International Airport from 1989 to 2019

Significance Threshold and Comfort Criteria

Significance Threshold

In the City of Oakland, a wind analysis is required if the height of the project is 100 feet or greater (measured to the roof) and one of the following conditions exists: (a) the project is located adjacent to a substantial water body (i.e. Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in downtown. Since the proposed project (approximately 335 feet tall) exceeds 100 feet in height and is located in downtown, it is subject to the thresholds of significance.

For the purposes of this study, the City of Oakland considers a significant wind impact to occur if a project were to "Create winds exceeding 36 mph for more than one hour during daylight hours of the year". The Planning Code defines these wind speeds in terms of Equivalent Wind Speeds (EWS): average wind speeds adjusted to include the level of gustiness and turbulence. EWS is calculated using the formula provided below, wherein the mean wind speed is increased when the turbulence intensity is greater than 15%:

$$\boldsymbol{EWS} = \boldsymbol{V_m} \times (\mathbf{2} \times \boldsymbol{TI} + \mathbf{0.7})$$

where $\boldsymbol{EWS}$ = equivalent wind speed

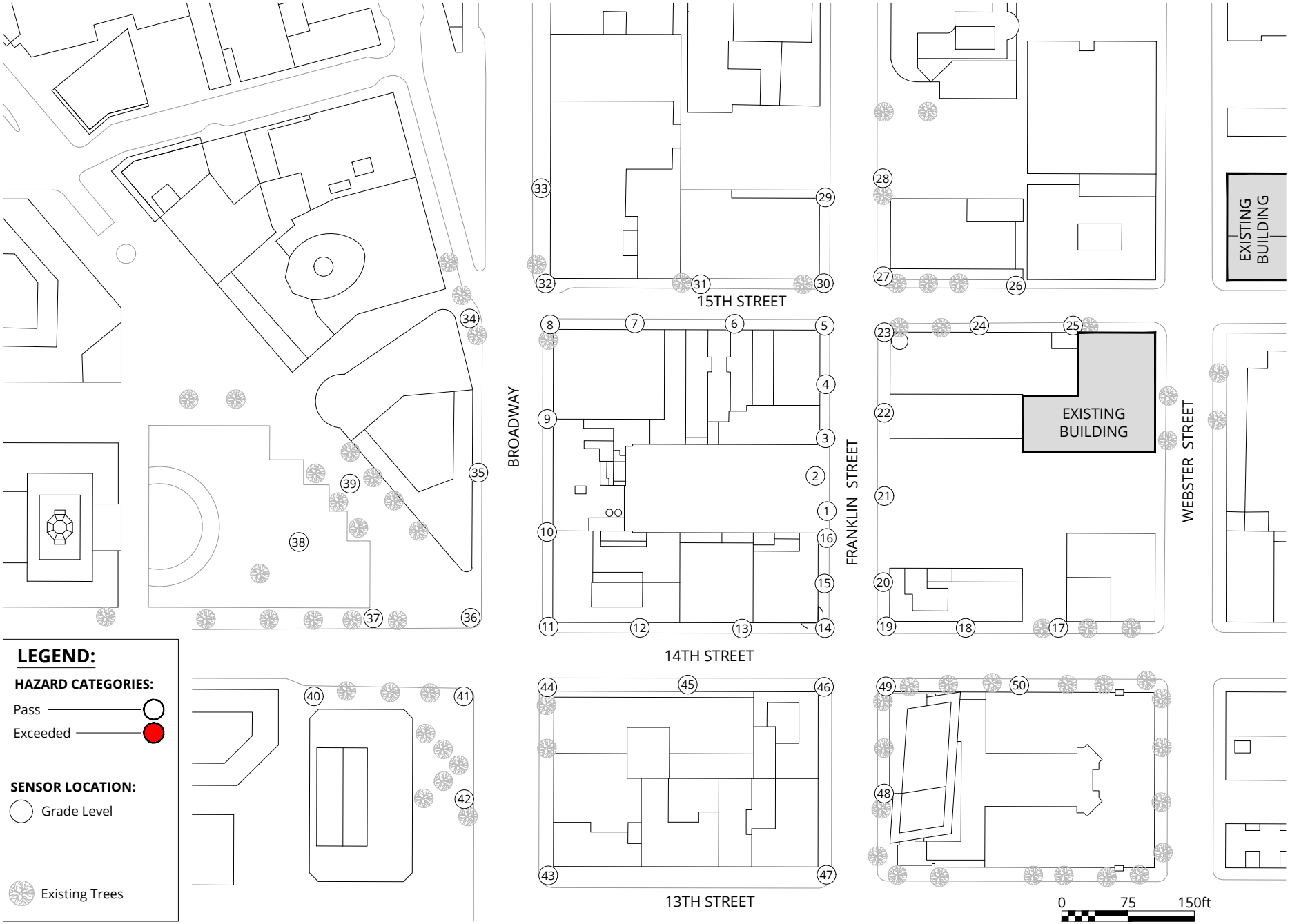
$\boldsymbol{V_m}$ = mean pedestrian-level wind speed

$\boldsymbol{TI}$ = turbulence intensity

Wind Comfort

Although not applicable towards Significant Wind Impacts as defined by the City of Oakland, wind comfort speeds have been calculated for informational purposes. Based on the San Francisco Planning Code Section 148, the comfort criteria are that wind speeds (EWS) do not exceed 11 mph for more than 10% of the time during the year, when calculated for daylight hours in substantial pedestrian use areas. A lower wind speed threshold of 7 mph may be considered for public seating areas where calmer wind conditions are ideal.

FIGURES



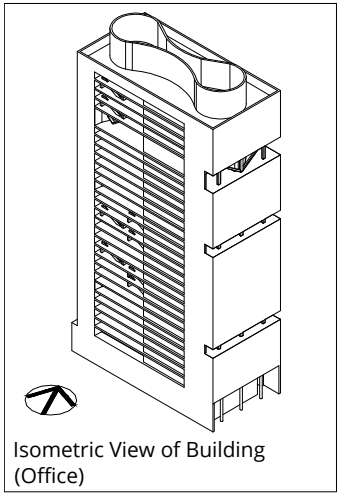
Pedestrian Wind Hazard Conditions
Existing
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 1A
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



Isometric View of Building (Office)

LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Existing Trees

Pedestrian Wind Hazard Conditions

Existing + Project (Office)

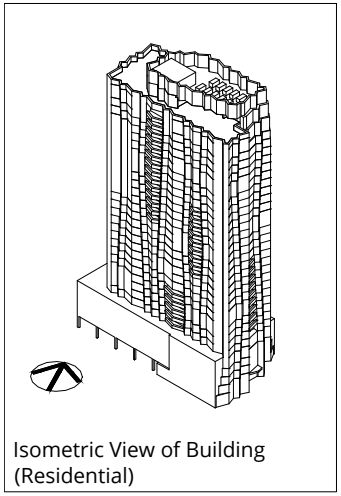
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 1B
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



Isometric View of Building
(Residential)

LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Existing Trees

Pedestrian Wind Hazard Conditions

Existing + Project (Residential)
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 1C
Approx. Scale:	1"=150'
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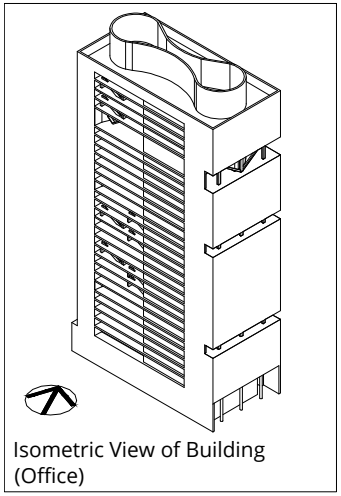


Isometric View of Building (Office)

LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Existing Trees

Pedestrian Wind Hazard Conditions

Project (Office) + Cumulative

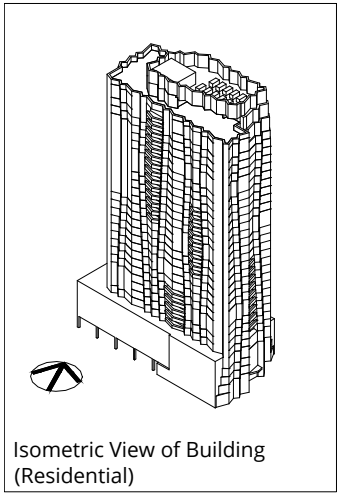
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 1D
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



LEGEND:

HAZARD CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Existing Trees

Pedestrian Wind Hazard Conditions

Project (Residential) + Cumulative

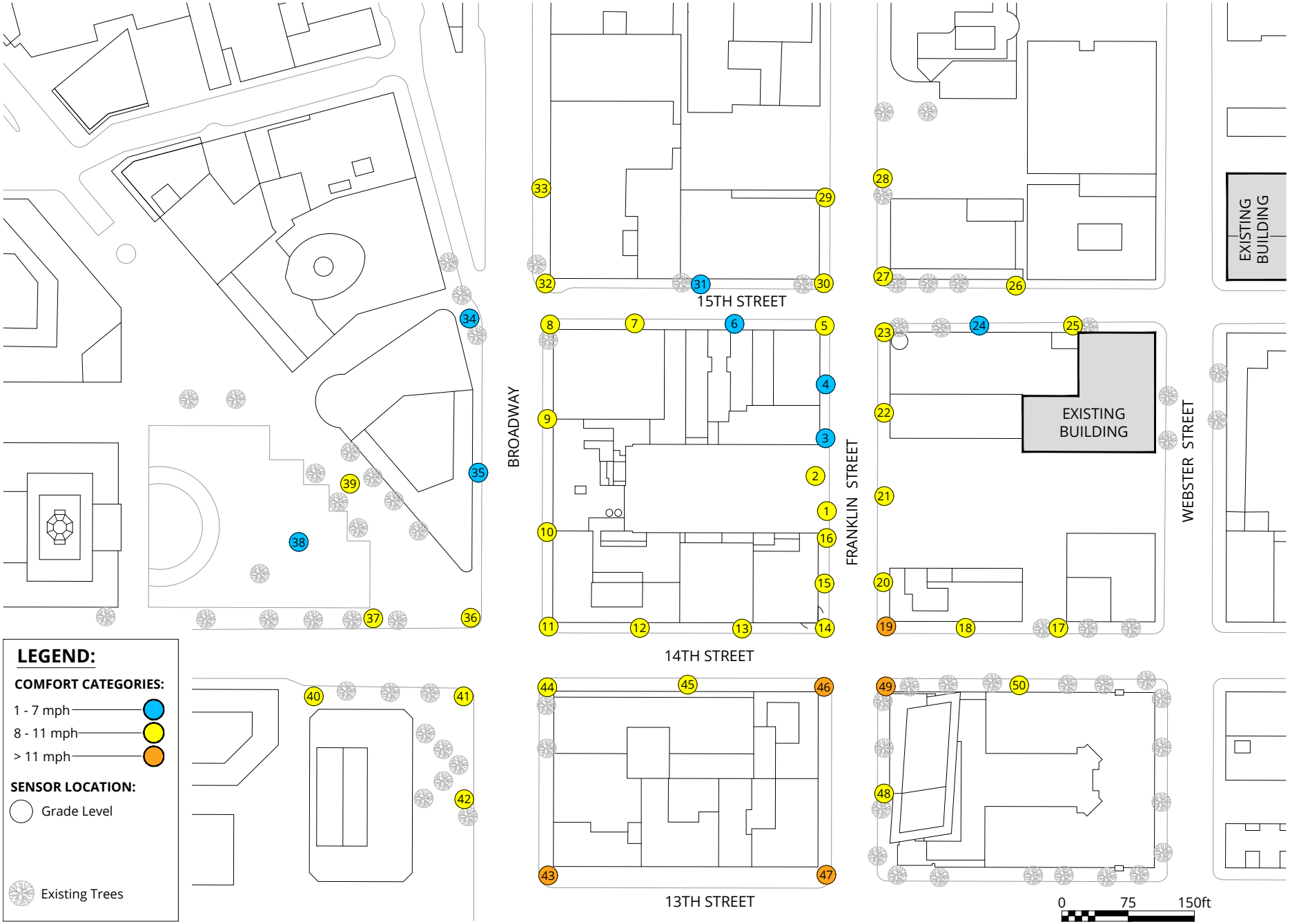
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 1E
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



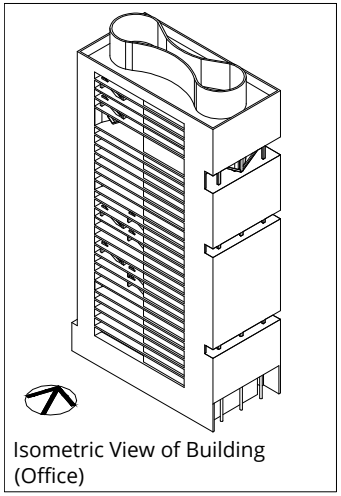
Pedestrian Wind Comfort Conditions
Existing
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 2A
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



Isometric View of Building (Office)

LEGEND:

COMFORT CATEGORIES:

- 1 - 7 mph
- 8 - 11 mph
- > 11 mph

SENSOR LOCATION:

- Grade Level
- Existing Trees

Pedestrian Wind Comfort Conditions

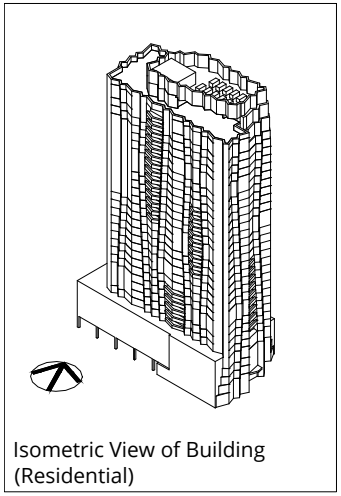
Existing + Project (Office)
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 2B
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



LEGEND:

COMFORT CATEGORIES:

- 1 - 7 mph
- 8 - 11 mph
- > 11 mph

SENSOR LOCATION:

- Grade Level
- Existing Trees

Pedestrian Wind Comfort Conditions

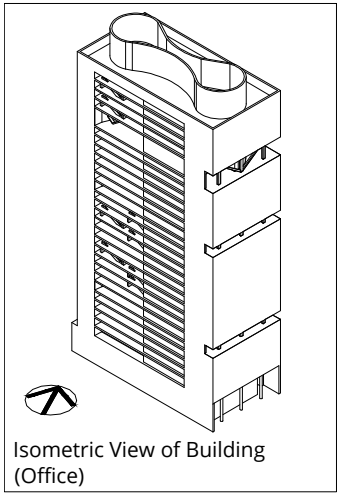
Existing + Project (Residential)
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 2C
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



Isometric View of Building (Office)

LEGEND:

COMFORT CATEGORIES:

- 1 - 7 mph
- 8 - 11 mph
- > 11 mph

SENSOR LOCATION:

- Grade Level
- Existing Trees

Pedestrian Wind Comfort Conditions

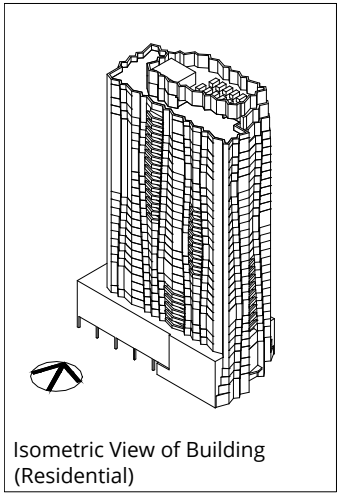
Project (Office) + Cumulative
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 2D
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020



LEGEND:

COMFORT CATEGORIES:

- 1 - 7 mph
- 8 - 11 mph
- > 11 mph

SENSOR LOCATION:

- Grade Level
- Existing Trees

Pedestrian Wind Comfort Conditions

Project (Residential) + Cumulative
Annual

1431 Franklin Street - Oakland, CA

True North

Project #2002586

Drawn by: NPDC	Figure: 2E
Approx. Scale:	1"=150'
Date Revised:	Sept. 9, 2020

TABLES

Table 1: Wind Hazard Conditions

Location	Existing			Existing + Project (Office)				Existing + Project (Residential)				Project (Office) + Cumulative				Project (Residential) + Cumulative			
	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds
1	25	0		20	0	0		18	0	0		20	0	0		17	0	0	
2	28	0		20	0	0		16	0	0		18	0	0		15	0	0	
3	21	0		24	0	0		20	0	0		24	0	0		20	0	0	
4	20	0		26	0	0		24	0	0		22	0	0		20	0	0	
5	29	0		31	0	0		30	0	0		27	0	0		27	0	0	
6	19	0		20	0	0		20	0	0		19	0	0		18	0	0	
7	22	0		23	0	0		23	0	0		21	0	0		21	0	0	
8	22	0		23	0	0		22	0	0		22	0	0		21	0	0	
9	21	0		20	0	0		20	0	0		19	0	0		20	0	0	
10	18	0		19	0	0		17	0	0		17	0	0		17	0	0	
11	23	0		28	0	0		26	0	0		29	0	0		27	0	0	
12	19	0		19	0	0		19	0	0		20	0	0		19	0	0	
13	34	0		32	0	0		35	0	0		31	0	0		35	0	0	
14	24	0		26	0	0		26	0	0		23	0	0		23	0	0	
15	26	0		32	0	0		29	0	0		24	0	0		24	0	0	
16	21	0		33	0	0		24	0	0		23	0	0		20	0	0	
17	21	0		25	0	0		23	0	0		24	0	0		22	0	0	
18	24	0		26	0	0		25	0	0		26	0	0		25	0	0	
19	35	0		31	0	0		31	0	0		28	0	0		29	0	0	
20	23	0		24	0	0		23	0	0		25	0	0		23	0	0	
21	29	0		28	0	0		27	0	0		27	0	0		27	0	0	
22	23	0		25	0	0		25	0	0		23	0	0		26	0	0	
23	21	0		21	0	0		20	0	0		19	0	0		19	0	0	
24	18	0		19	0	0		19	0	0		19	0	0		19	0	0	
25	19	0		19	0	0		19	0	0		24	0	0		23	0	0	
26	22	0		21	0	0		22	0	0		23	0	0		24	0	0	
27	22	0		21	0	0		22	0	0		21	0	0		22	0	0	
28	27	0		26	0	0		27	0	0		28	0	0		27	0	0	
29	30	0		26	0	0		30	0	0		30	0	0		29	0	0	

Location	Existing			Existing + Project (Office)				Existing + Project (Residential)				Project (Office) + Cumulative				Project (Residential) + Cumulative			
	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hr/year (mph)	Hours per Year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Existing	Exceeds
30	26	0		25	0	0		25	0	0		23	0	0		25	0	0	
31	19	0		20	0	0		19	0	0		19	0	0		19	0	0	
32	28	0		29	0	0		29	0	0		24	0	0		25	0	0	
33	22	0		22	0	0		22	0	0		20	0	0		22	0	0	
34	17	0		19	0	0		17	0	0		18	0	0		17	0	0	
35	22	0		26	0	0		22	0	0		26	0	0		22	0	0	
36	22	0		22	0	0		22	0	0		21	0	0		22	0	0	
37	20	0		19	0	0		20	0	0		19	0	0		19	0	0	
38	21	0		20	0	0		21	0	0		20	0	0		20	0	0	
39	23	0		22	0	0		22	0	0		22	0	0		22	0	0	
40	21	0		21	0	0		22	0	0		21	0	0		21	0	0	
41	24	0		24	0	0		24	0	0		24	0	0		24	0	0	
42	23	0		22	0	0		23	0	0		22	0	0		23	0	0	
43	28	0		28	0	0		28	0	0		27	0	0		27	0	0	
44	26	0		21	0	0		23	0	0		20	0	0		21	0	0	
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47	26	0		27	0	0		26	0	0		27	0	0		26	0	0	
48	23	0		22	0	0		22	0	0		21	0	0		22	0	0	
49	29	0		31	0	0		29	0	0		29	0	0		29	0	0	
50	18	0		19	0	0		18	0	0		19	0	0		18	0	0	

Summary	Average (mph)	Total Hours	Total	Average (mph)	Total Hours	Hours Change	Total	Average (mph)	Total Hours	Hours Change	Total	Average (mph)	Total Hours	Hours Change	Total	Average (mph)	Total Hours	Hours Change	Total
	24	**0**	**0 --- 50**	**24**	**0**	**0**	**0 --- 50**	**23**	**0**	**0**	**0 --- 50**	**23**	**0**	**0**	**0 --- 50**	**23**	**0**	**0**	**0 --- 50**

Table 2: Wind Comfort Conditions

Location	Existing			Existing + Project (Office)				Existing + Project (Residential)				Project (Office) + Cumulative				Project (Residential) + Cumulative			
	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds
1	8	3		10	4	2		8	2	0		10	4	2		8	1	0	
2	8	3		6	1	-2		6	1	-2		6	1	-2		6	0	-2	
3	7	1		8	2	1		7	1	0		8	2	1		7	1	0	
4	6	1		7	3	1		7	2	1		7	1	1		6	1	0	
5	10	7		10	7	0		10	8	0		10	7	0		11	10	1	
6	7	1		8	2	1		8	1	1		9	2	2		8	2	1	
7	9	4		8	3	-1		9	3	0		9	4	0		10	5	1	
8	9	3		9	4	0		9	4	0		9	3	0		9	3	0	
9	9	4		9	4	0		9	4	0		9	3	0		9	3	0	
10	8	1		8	1	0		8	1	0		7	1	-1		8	1	0	
11	10	5		11	10	1		10	8	0		12	14	2	e	12	13	2	e
12	8	2		8	2	0		8	2	0		8	2	0		8	2	0	
13	9	5		8	3	-1		9	4	0		8	3	-1		9	4	0	
14	10	6		10	8	0		10	7	0		10	6	0		10	5	0	
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17	9	3		9	4	0		9	4	0		10	5	1		9	4	0	
18	11	10		12	14	1	e	12	13	1	e	12	15	1	e	11	10	0	
19	12	16	e	12	17	0	e	12	17	0	e	12	17	0	e	12	15	0	e
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21	9	5		11	10	2		10	7	1		11	10	2		10	8	1	
22	9	3		9	4	0		9	5	0		9	4	0		10	8	1	
23	9	4		9	3	0		9	3	0		9	2	0		9	4	0	
24	7	1		7	1	0		7	1	0		7	1	0		8	2	1	
25	9	2		8	1	-1		9	2	0		8	2	-1		8	2	-1	
26	8	2		8	2	0		8	2	0		7	2	-1		8	2	0	
27	10	8		10	7	0		11	10	1		10	7	0		11	10	1	
28	11	10		11	10	0		11	10	0		11	10	0		12	14	1	e
29	9	4		8	3	-1		9	4	0		8	3	-1		9	3	0	

Location	Existing			Existing + Project (Office)				Existing + Project (Residential)				Project (Office) + Cumulative				Project (Residential) + Cumulative			
	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	% of Time Wind Speed Exceeds 11 mph (%)	Speed Change Relative to Existing (mph)	Exceeds
30	10	6		9	6	-1		10	6	0		10	6	0		11	10	1	
31	7	1		7	1	0		7	1	0		8	2	1		8	2	1	
32	10	6		9	5	-1		10	6	0		10	6	0		10	8	0	
33	9	3		8	3	-1		9	3	0		10	4	1		10	7	1	
34	7	1		7	1	0		7	1	0		7	1	0		7	1	0	
35	7	1		7	2	0		7	1	0		7	2	0		7	1	0	
36	9	4		9	5	0		9	4	0		9	4	0		9	4	0	
37	8	2		8	2	0		8	2	0		8	1	0		8	1	0	
38	7	1		8	1	1		8	1	1		8	2	1		8	2	1	
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41	9	4		9	5	0		9	4	0		9	4	0		9	5	0	
42	9	5		10	5	1		9	5	0		10	5	1		9	5	0	
43	12	12	e	12	13	0	e	12	13	0	e	12	15	0	e	12	15	0	e
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45	8	2		8	3	0		8	3	0		9	3	1		9	3	1	
46	13	20	e	13	21	0	e	13	21	0	e	13	20	0	e	13	19	0	e
47	12	17	e	13	18	1	e	13	18	1	e	13	19	1	e	13	18	1	e
48	9	4		9	4	0		9	4	0		9	4	0		9	4	0	
49	13	18	e	13	21	0	e	13	19	0	e	13	21	0	e	13	18	0	e
50	8	2		8	2	0		8	2	0		8	2	0		8	1	0	

Summary	Average (mph)	Average (%)	Total	Average (mph)	Average (%)	Speed Change (mph)	Total	Average (mph)	Average (%)	Speed Change (mph)	Total	Average (mph)	Average (%)	Speed Change (mph)	Total	Average (mph)	Average (%)	Speed Change (mph)	Total
	9	**5**	**5 --- 50**	**9**	**6**	**0**	**6 --- 50**	**9**	**5**	**0**	**6 --- 50**	**9**	**6**	**0**	**7 --- 50**	**9**	**6**	**0**	**7 --- 50**

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Email: solutions@rwdi.com

April 27, 2022

Brandon Northart
Urban Planning Partners, Inc.
T: 510.251.8210
E: borthart@up-partners.com

Re: Pedestrian Wind Study
1431 Franklin Street
RWDI Reference No. 2002586

Dear Brandon,

Rowan Williams Davies & Irwin Inc. (RWDI) conducted a pedestrian wind tunnel study for the proposed 1431 Franklin Street project in Oakland, CA, results of which were presented in a report dated October 13, 2021(see Appendix 1). These results pertain to the two designs of the proposed project (residential and office) within the context of existing and future surroundings.

In Image 1, the residential and office building designs are shown. Since the height and geometry of these two designs are similar, their wind impact on the adjacent and nearby pedestrian areas are comparable. The overall characteristics of these designs are favorable from a pedestrian wind perspective. The longer axis of the building is parallel to the prevailing westerly winds which helps reduce the wind impact of the project at grade level. Moreover, the building is flanked by the existing buildings on the north, south and west sides of the site that helps deflect downwashing winds away from the grade level.

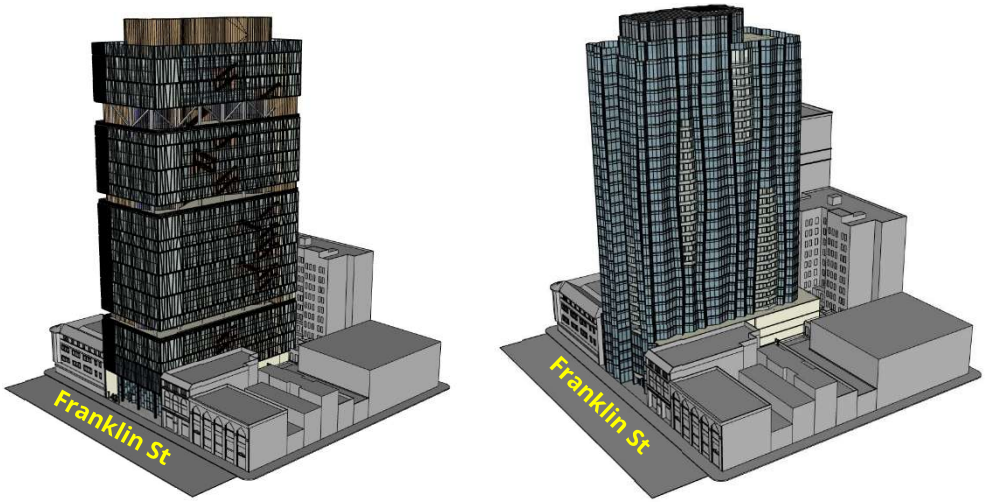


Image 1: Proposed Project Designs Received on August 4, 2020: Office (left) and Residential (Right)

Following the completion of the wind tunnel testing and issuing the report, RWDI received updated drawings for both the office and residential buildings on February 7, 2022. Schematic views of the

updated building designs are shown in Image 2. The following summarizes the changes made to the building designs:

Office Building: 16 ft increase in height (from 408 ft to 424 ft)

Residential Building: 16 ft increase in building (from 397 ft to 413 ft) and major sculpting changes

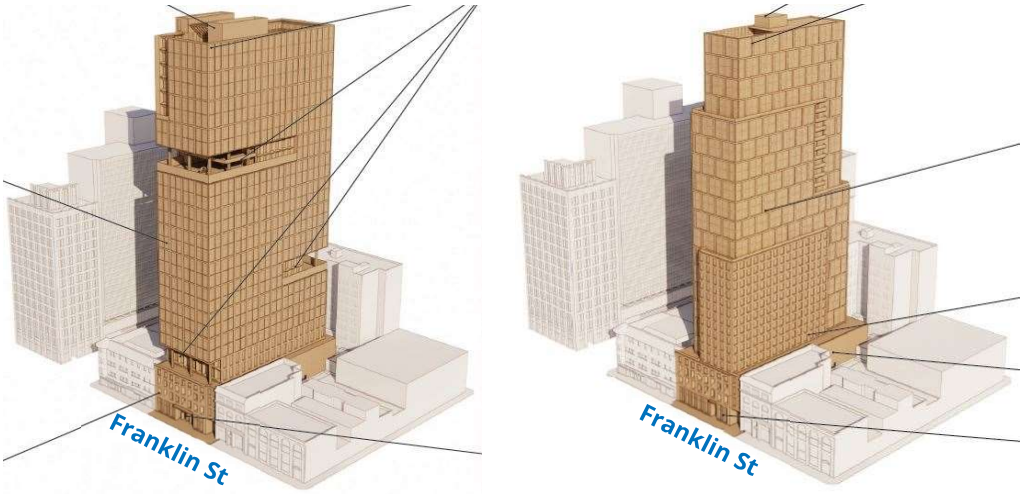


Image 2: Updated Project Designs Received on February 7, 2022: Office (left) and Residential (Right)

It is RWDI's opinion that the proposed changes to the designs of the office and residential buildings are not significant enough to alter the wind conditions when compared to the original designs. Thus, the wind comfort conditions for the updated building designs are expected to remain similar to those presented in RWDI's report dated October 13, 2022. The report shows no wind hazard conditions for the assessed configurations, which will also remain the case with the updated designs.

Should you have any questions or require further information, please do not hesitate to contact us.

Yours very truly,

Rowan Williams Davies & Irwin Inc. (RWDI)

Rose Babaei, Ph.D.
Senior Technical Coordinator – Microclimate

Dan Bacon
Senior Project Manager / Principal

ATTACHMENT G: AIR QUALITY AND GREENHOUSE GAS EMISSIONS ESTIMATES AND HEALTH RISK ANALYSIS

1431 Franklin Residential Scenario.v2.350 units

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	196.00	Space	0.00	77,400.00	0
Apartments High Rise	350.00	Dwelling Unit	3.00	344,490.00	1001

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	206	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

1431 Franklin Residential Scenario.v2.350 units - Alameda County, Annual

Project Characteristics - PGE CO2 intensity factor modified to the most recent value from 2018

Land Use - Input 3 acres for project site to acocunt for construction activities needed for a high rise building. Residential sqft includes supporting functions such as lobby.

Construction Phase - Demolition phase was deleted from the default schedule because the project site is an existing parking lot and no major demo would be involved.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - A bore/drill rig was added because auger cast piles would be used.

Off-road Equipment - .

Off-road Equipment -

Trips and VMT - .

Grading - According to RFI, 6,700 cyds of soil would be off-hauled.

Vehicle Trips - Rates adjusted to be consistent with the trip rates from the trip generation report for 315 units.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - According to RFI, no woodstoves or fireplaces are proposed.

Energy Use - Energy intensity factors for the residential land use adjusted to 2019 Title 24.

Water And Wastewater - EBMUD services the project area and provides 100 percent cogeneration

Solid Waste - Solid waste disposal rate adjusted to be specific to the City of Oakland.

Construction Off-road Equipment Mitigation - Equipment > 100 HP needs to have Tier 4 Final engines; <100 HP Tier 2 + Level III dpf to reduce construction health risks

Energy Mitigation - LEED checklist: Optimize Energy Performance, 20 percent improvement. Not a mitigation measure.

Water Mitigation - LEED Checklist: 50 percent outdoor water use reduction from baseline; 35 percent indoor water use reduction from baseline. Not a mitigation measure.

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Conservatively assume that a 1,000-kW diesel emergency generator would be included .

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	572.00

1431 Franklin Residential Scenario.v2.350 units - Alameda County, Annual

tblEnergyUse	T24E	426.45	380.80
tblFireplaces	NumberGas	52.50	0.00
tblFireplaces	NumberNoFireplace	14.00	0.00
tblFireplaces	NumberWood	59.50	0.00
tblGrading	MaterialExported	0.00	6,700.00
tblLandUse	LandUseSquareFeet	78,400.00	77,400.00
tblLandUse	LandUseSquareFeet	350,000.00	344,490.00
tblLandUse	LotAcreage	1.76	0.00
tblLandUse	LotAcreage	5.65	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	CO2IntensityFactor	641.35	206
tblSolidWaste	SolidWasteGenerationRate	161.00	73.60
tblTripsAndVMT	HaulingTripNumber	0.00	838.00
tblVehicleTrips	ST_TR	4.98	3.43
tblVehicleTrips	SU_TR	3.65	2.51
tblVehicleTrips	WD_TR	4.20	2.89
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWoodstoves	NumberCatalytic	7.00	0.00
tblWoodstoves	NumberNoncatalytic	7.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1791	1.5211	1.5459	4.2300e-003	0.3215	0.0566	0.3781	0.1279	0.0531	0.1810	0.0000	381.2342	381.2342	0.0471	0.0000	382.4110
2023	2.5686	0.9742	1.1981	3.0700e-003	0.1296	0.0378	0.1673	0.0348	0.0355	0.0703	0.0000	275.0221	275.0221	0.0342	0.0000	275.8776
Maximum	**2.5686**	**1.5211**	**1.5459**	**4.2300e-003**	**0.3215**	**0.0566**	**0.3781**	**0.1279**	**0.0531**	**0.1810**	**0.0000**	**381.2342**	**381.2342**	**0.0471**	**0.0000**	**382.4110**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1297	1.6929	1.6288	4.2300e-003	0.3215	0.0102	0.3317	0.1279	0.0101	0.1380	0.0000	381.2340	381.2340	0.0471	0.0000	382.4108
2023	2.5388	1.2248	1.2645	3.0700e-003	0.1296	7.6700e-003	0.1372	0.0348	7.6100e-003	0.0425	0.0000	275.0219	275.0219	0.0342	0.0000	275.8775
Maximum	**2.5388**	**1.6929**	**1.6288**	**4.2300e-003**	**0.3215**	**0.0102**	**0.3317**	**0.1279**	**0.0101**	**0.1380**	**0.0000**	**381.2340**	**381.2340**	**0.0471**	**0.0000**	**382.4108**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.88**	**-16.93**	**-5.44**	**0.00**	**0.00**	**81.05**	**14.02**	**0.00**	**80.02**	**28.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2022	9-30-2022	0.9372	0.9494
2	10-1-2022	12-31-2022	0.7921	0.8982
3	1-1-2023	3-31-2023	0.6888	0.8365
4	4-1-2023	6-30-2023	2.8557	2.9285
		Highest	2.8557	2.9285

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6726	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504
Energy	0.0165	0.1408	0.0599	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	336.4839	336.4839	0.0275	8.0400e-003	339.5685
Mobile	0.2201	1.4479	2.3988	0.0105	0.8805	8.3900e-003	0.8889	0.2366	7.8400e-003	0.2445	0.0000	967.6303	967.6303	0.0367	0.0000	968.5481
Stationary	0.0550	0.2460	0.1403	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Waste						0.0000	0.0000		0.0000	0.0000	14.9401	0.0000	14.9401	0.8829	0.0000	37.0136
Water						0.0000	0.0000		0.0000	0.0000	8.0681	15.1575	23.2255	0.0299	0.0180	29.3332
Total	**1.9642**	**1.8647**	**5.1972**	**0.0118**	**0.8805**	**0.0423**	**0.9228**	**0.2366**	**0.0417**	**0.2783**	**23.0082**	**1,349.0527**	**1,372.0609**	**0.9847**	**0.0260**	**1,404.4357**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6726	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504
Energy	0.0142	0.1211	0.0515	7.7000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	299.2064	299.2064	0.0251	7.2000e-003	301.9792
Mobile	0.2201	1.4479	2.3988	0.0105	0.8805	8.3900e-003	0.8889	0.2366	7.8400e-003	0.2445	0.0000	967.6303	967.6303	0.0367	0.0000	968.5481
Stationary	0.0550	0.2460	0.1403	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Waste						0.0000	0.0000		0.0000	0.0000	14.9401	0.0000	14.9401	0.8829	0.0000	37.0136
Water						0.0000	0.0000		0.0000	0.0000	5.2442	9.1471	14.3914	0.0193	0.0117	18.3527
Total	**1.9619**	**1.8449**	**5.1888**	**0.0116**	**0.8805**	**0.0407**	**0.9212**	**0.2366**	**0.0401**	**0.2767**	**20.1844**	**1,305.7649**	**1,325.9493**	**0.9717**	**0.0189**	**1,355.8660**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.12**	**1.06**	**0.16**	**1.11**	**0.00**	**3.76**	**0.17**	**0.00**	**3.81**	**0.57**	**12.27**	**3.21**	**3.36**	**1.32**	**27.51**	**3.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2022	7/5/2022	5	3	
2	Grading	Grading	7/6/2022	7/13/2022	5	6	
3	Building Construction	Building Construction	7/14/2022	5/17/2023	5	220	
4	Paving	Paving	5/18/2023	5/31/2023	5	10	
5	Architectural Coating	Architectural Coating	6/1/2023	6/14/2023	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 697,592; Residential Outdoor: 232,531; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,644 (Architectural Coating – sqft)

OffRoad Equipment

1431 Franklin Residential Scenario.v2.350 units - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	838.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	285.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	57.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0907	0.0000	0.0907	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7600e-003	0.0496	0.0296	6.0000e-005		2.4200e-003	2.4200e-003		2.2300e-003	2.2300e-003	0.0000	5.0159	5.0159	1.6200e-003	0.0000	5.0565
Total	**4.7600e-003**	**0.0496**	**0.0296**	**6.0000e-005**	**0.0907**	**2.4200e-003**	**0.0931**	**0.0497**	**2.2300e-003**	**0.0519**	**0.0000**	**5.0159**	**5.0159**	**1.6200e-003**	**0.0000**	**5.0565**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1700e-003	0.1041	0.0204	3.2000e-004	7.1000e-003	3.0000e-004	7.3900e-003	1.9500e-003	2.8000e-004	2.2400e-003	0.0000	31.2600	31.2600	1.5200e-003	0.0000	31.2981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1765	0.1765	0.0000	0.0000	0.1766
Total	**3.2500e-003**	**0.1041**	**0.0210**	**3.2000e-004**	**7.3100e-003**	**3.0000e-004**	**7.6000e-003**	**2.0100e-003**	**2.8000e-004**	**2.3000e-003**	**0.0000**	**31.4365**	**31.4365**	**1.5200e-003**	**0.0000**	**31.4747**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0907	0.0000	0.0907	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3400e-003	0.0201	0.0313	6.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	5.0159	5.0159	1.6200e-003	0.0000	5.0565
Total	**1.3400e-003**	**0.0201**	**0.0313**	**6.0000e-005**	**0.0907**	**1.7000e-004**	**0.0909**	**0.0497**	**1.7000e-004**	**0.0499**	**0.0000**	**5.0159**	**5.0159**	**1.6200e-003**	**0.0000**	**5.0565**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1700e-003	0.1041	0.0204	3.2000e-004	7.1000e-003	3.0000e-004	7.3900e-003	1.9500e-003	2.8000e-004	2.2400e-003	0.0000	31.2600	31.2600	1.5200e-003	0.0000	31.2981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1765	0.1765	0.0000	0.0000	0.1766
Total	**3.2500e-003**	**0.1041**	**0.0210**	**3.2000e-004**	**7.3100e-003**	**3.0000e-004**	**7.6000e-003**	**2.0100e-003**	**2.8000e-004**	**2.3000e-003**	**0.0000**	**31.4365**	**31.4365**	**1.5200e-003**	**0.0000**	**31.4747**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5200e-003	0.0694	0.0519	1.2000e-004		3.0400e-003	3.0400e-003		2.8000e-003	2.8000e-003	0.0000	10.3027	10.3027	3.3300e-003	0.0000	10.3860
Total	**6.5200e-003**	**0.0694**	**0.0519**	**1.2000e-004**	**0.0655**	**3.0400e-003**	**0.0686**	**0.0337**	**2.8000e-003**	**0.0365**	**0.0000**	**10.3027**	**10.3027**	**3.3300e-003**	**0.0000**	**10.3860**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3532
Total	**1.6000e-004**	**1.1000e-004**	**1.1800e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3530**	**0.3530**	**1.0000e-005**	**0.0000**	**0.3532**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4100e-003	0.0318	0.0661	1.2000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	10.3027	10.3027	3.3300e-003	0.0000	10.3860
Total	**2.4100e-003**	**0.0318**	**0.0661**	**1.2000e-004**	**0.0655**	**3.1000e-004**	**0.0658**	**0.0337**	**3.1000e-004**	**0.0340**	**0.0000**	**10.3027**	**10.3027**	**3.3300e-003**	**0.0000**	**10.3860**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1800e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3532
Total	**1.6000e-004**	**1.1000e-004**	**1.1800e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3530**	**0.3530**	**1.0000e-005**	**0.0000**	**0.3532**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1041	0.9526	0.9982	1.6400e-003		0.0494	0.0494		0.0464	0.0464	0.0000	141.3524	141.3524	0.0339	0.0000	142.1990
Total	**0.1041**	**0.9526**	**0.9982**	**1.6400e-003**		**0.0494**	**0.0494**		**0.0464**	**0.0464**	**0.0000**	**141.3524**	**141.3524**	**0.0339**	**0.0000**	**142.1990**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8200e-003	0.3099	0.0647	8.3000e-004	0.0200	5.9000e-004	0.0206	5.7900e-003	5.6000e-004	6.3600e-003	0.0000	79.1197	79.1197	4.1900e-003	0.0000	79.2246
Worker	0.0516	0.0354	0.3793	1.2600e-003	0.1375	9.0000e-004	0.1384	0.0366	8.3000e-004	0.0374	0.0000	113.6539	113.6539	2.5200e-003	0.0000	113.7169
Total	**0.0604**	**0.3453**	**0.4441**	**2.0900e-003**	**0.1575**	**1.4900e-003**	**0.1590**	**0.0424**	**1.3900e-003**	**0.0438**	**0.0000**	**192.7736**	**192.7736**	**6.7100e-003**	**0.0000**	**192.9415**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0622	1.1915	1.0651	1.6400e-003		7.9400e-003	7.9400e-003		7.9400e-003	7.9400e-003	0.0000	141.3522	141.3522	0.0339	0.0000	142.1988
Total	**0.0622**	**1.1915**	**1.0651**	**1.6400e-003**		**7.9400e-003**	**7.9400e-003**		**7.9400e-003**	**7.9400e-003**	**0.0000**	**141.3522**	**141.3522**	**0.0339**	**0.0000**	**142.1988**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8200e-003	0.3099	0.0647	8.3000e-004	0.0200	5.9000e-004	0.0206	5.7900e-003	5.6000e-004	6.3600e-003	0.0000	79.1197	79.1197	4.1900e-003	0.0000	79.2246
Worker	0.0516	0.0354	0.3793	1.2600e-003	0.1375	9.0000e-004	0.1384	0.0366	8.3000e-004	0.0374	0.0000	113.6539	113.6539	2.5200e-003	0.0000	113.7169
Total	**0.0604**	**0.3453**	**0.4441**	**2.0900e-003**	**0.1575**	**1.4900e-003**	**0.1590**	**0.0424**	**1.3900e-003**	**0.0438**	**0.0000**	**192.7736**	**192.7736**	**6.7100e-003**	**0.0000**	**192.9415**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0771	0.7049	0.7960	1.3200e-003		0.0343	0.0343		0.0323	0.0323	0.0000	113.5843	113.5843	0.0270	0.0000	114.2598
Total	**0.0771**	**0.7049**	**0.7960**	**1.3200e-003**		**0.0343**	**0.0343**		**0.0323**	**0.0323**	**0.0000**	**113.5843**	**113.5843**	**0.0270**	**0.0000**	**114.2598**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1927	0.0455	6.4000e-004	0.0161	2.0000e-004	0.0163	4.6500e-003	2.0000e-004	4.8500e-003	0.0000	61.7471	61.7471	2.6900e-003	0.0000	61.8144
Worker	0.0386	0.0255	0.2790	9.7000e-004	0.1104	7.1000e-004	0.1111	0.0294	6.5000e-004	0.0300	0.0000	87.8041	87.8041	1.8100e-003	0.0000	87.8494
Total	**0.0438**	**0.2182**	**0.3245**	**1.6100e-003**	**0.1265**	**9.1000e-004**	**0.1274**	**0.0340**	**8.5000e-004**	**0.0349**	**0.0000**	**149.5512**	**149.5512**	**4.5000e-003**	**0.0000**	**149.6638**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0499	0.9571	0.8556	1.3200e-003		6.3800e-003	6.3800e-003		6.3800e-003	6.3800e-003	0.0000	113.5842	113.5842	0.0270	0.0000	114.2597
Total	**0.0499**	**0.9571**	**0.8556**	**1.3200e-003**		**6.3800e-003**	**6.3800e-003**		**6.3800e-003**	**6.3800e-003**	**0.0000**	**113.5842**	**113.5842**	**0.0270**	**0.0000**	**114.2597**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1927	0.0455	6.4000e-004	0.0161	2.0000e-004	0.0163	4.6500e-003	2.0000e-004	4.8500e-003	0.0000	61.7471	61.7471	2.6900e-003	0.0000	61.8144
Worker	0.0386	0.0255	0.2790	9.7000e-004	0.1104	7.1000e-004	0.1111	0.0294	6.5000e-004	0.0300	0.0000	87.8041	87.8041	1.8100e-003	0.0000	87.8494
Total	**0.0438**	**0.2182**	**0.3245**	**1.6100e-003**	**0.1265**	**9.1000e-004**	**0.1274**	**0.0340**	**8.5000e-004**	**0.0349**	**0.0000**	**149.5512**	**149.5512**	**4.5000e-003**	**0.0000**	**149.6638**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5900e-003	0.0440	0.0610	9.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	8.1893	8.1893	2.5700e-003	0.0000	8.2536
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5900e-003**	**0.0440**	**0.0610**	**9.0000e-005**		**2.1800e-003**	**2.1800e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**8.1893**	**8.1893**	**2.5700e-003**	**0.0000**	**8.2536**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6287	0.6287	1.0000e-005	0.0000	0.6291
Total	**2.8000e-004**	**1.8000e-004**	**2.0000e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6287**	**0.6287**	**1.0000e-005**	**0.0000**	**0.6291**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3200e-003	0.0370	0.0677	9.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	8.1893	8.1893	2.5700e-003	0.0000	8.2536
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3200e-003**	**0.0370**	**0.0677**	**9.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**8.1893**	**8.1893**	**2.5700e-003**	**0.0000**	**8.2536**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6287	0.6287	1.0000e-005	0.0000	0.6291
Total	**2.8000e-004**	**1.8000e-004**	**2.0000e-003**	**1.0000e-005**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6287**	**0.6287**	**1.0000e-005**	**0.0000**	**0.6291**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.4412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**2.4421**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.2000e-004	5.6900e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7919	1.7919	4.0000e-005	0.0000	1.7928
Total	**7.9000e-004**	**5.2000e-004**	**5.6900e-003**	**2.0000e-005**	**2.2500e-003**	**1.0000e-005**	**2.2700e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.7919**	**1.7919**	**4.0000e-005**	**0.0000**	**1.7928**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.4412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7000e-004	0.0118	9.1600e-003	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**2.4417**	**0.0118**	**9.1600e-003**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.2000e-004	5.6900e-003	2.0000e-005	2.2500e-003	1.0000e-005	2.2700e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7919	1.7919	4.0000e-005	0.0000	1.7928
Total	**7.9000e-004**	**5.2000e-004**	**5.6900e-003**	**2.0000e-005**	**2.2500e-003**	**1.0000e-005**	**2.2700e-003**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.7919**	**1.7919**	**4.0000e-005**	**0.0000**	**1.7928**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2201	1.4479	2.3988	0.0105	0.8805	8.3900e-003	0.8889	0.2366	7.8400e-003	0.2445	0.0000	967.6303	967.6303	0.0367	0.0000	968.5481
Unmitigated	0.2201	1.4479	2.3988	0.0105	0.8805	8.3900e-003	0.8889	0.2366	7.8400e-003	0.2445	0.0000	967.6303	967.6303	0.0367	0.0000	968.5481

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,011.50	1,200.50	878.50	2,354,645	2,354,645
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,011.50	1,200.50	878.50	2,354,645	2,354,645

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.563555	0.037576	0.190339	0.105468	0.014285	0.005132	0.025195	0.047484	0.002230	0.002277	0.005427	0.000351	0.000679
Enclosed Parking with Elevator	0.563555	0.037576	0.190339	0.105468	0.014285	0.005132	0.025195	0.047484	0.002230	0.002277	0.005427	0.000351	0.000679

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	158.9893	158.9893	0.0224	4.6300e-003	160.9288
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	173.4227	173.4227	0.0244	5.0500e-003	175.5383
NaturalGas Mitigated	0.0142	0.1211	0.0515	7.7000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	140.2172	140.2172	2.6900e-003	2.5700e-003	141.0504
NaturalGas Unmitigated	0.0165	0.1408	0.0599	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	163.0612	163.0612	3.1300e-003	2.9900e-003	164.0301

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	3.05565e+006	0.0165	0.1408	0.0599	9.0000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	163.0612	163.0612	3.1300e-003	2.9900e-003	164.0301
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0165**	**0.1408**	**0.0599**	**9.0000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**163.0612**	**163.0612**	**3.1300e-003**	**2.9900e-003**	**164.0301**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	2.62757e+006	0.0142	0.1211	0.0515	7.7000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	140.2172	140.2172	2.6900e-003	2.5700e-003	141.0504
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0142**	**0.1211**	**0.0515**	**7.7000e-004**		**9.7900e-003**	**9.7900e-003**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**140.2172**	**140.2172**	**2.6900e-003**	**2.5700e-003**	**141.0504**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.40242e+006	131.0417	0.0185	3.8200e-003	132.6403
Enclosed Parking with Elevator	453564	42.3810	5.9700e-003	1.2300e-003	42.8980
Total		**173.4227**	**0.0244**	**5.0500e-003**	**175.5383**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.33572e+006	124.8096	0.0176	3.6400e-003	126.3322
Enclosed Parking with Elevator	365792	34.1797	4.8100e-003	1.0000e-003	34.5966
Total		**158.9893**	**0.0224**	**4.6400e-003**	**160.9288**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6726	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504
Unmitigated	1.6726	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0781	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504
Total	**1.6726**	**0.0299**	**2.5981**	**1.4000e-004**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**4.2486**	**4.2486**	**4.0700e-003**	**0.0000**	**4.3504**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0781	0.0299	2.5981	1.4000e-004		0.0144	0.0144		0.0144	0.0144	0.0000	4.2486	4.2486	4.0700e-003	0.0000	4.3504
Total	**1.6726**	**0.0299**	**2.5981**	**1.4000e-004**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**4.2486**	**4.2486**	**4.0700e-003**	**0.0000**	**4.3504**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.3914	0.0193	0.0117	18.3527
Unmitigated	23.2255	0.0299	0.0180	29.3332

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	22.8039 / 14.3764	23.2255	0.0299	0.0180	29.3332
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**23.2255**	**0.0299**	**0.0180**	**29.3332**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	14.8225 / 7.18819	14.3914	0.0193	0.0117	18.3527
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.3914**	**0.0193**	**0.0117**	**18.3527**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.9401	0.8829	0.0000	37.0136
Unmitigated	14.9401	0.8829	0.0000	37.0136

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	73.6	14.9401	0.8829	0.0000	37.0136
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**14.9401**	**0.8829**	**0.0000**	**37.0136**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	73.6	14.9401	0.8829	0.0000	37.0136
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**14.9401**	**0.8829**	**0.0000**	**37.0136**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	1341	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

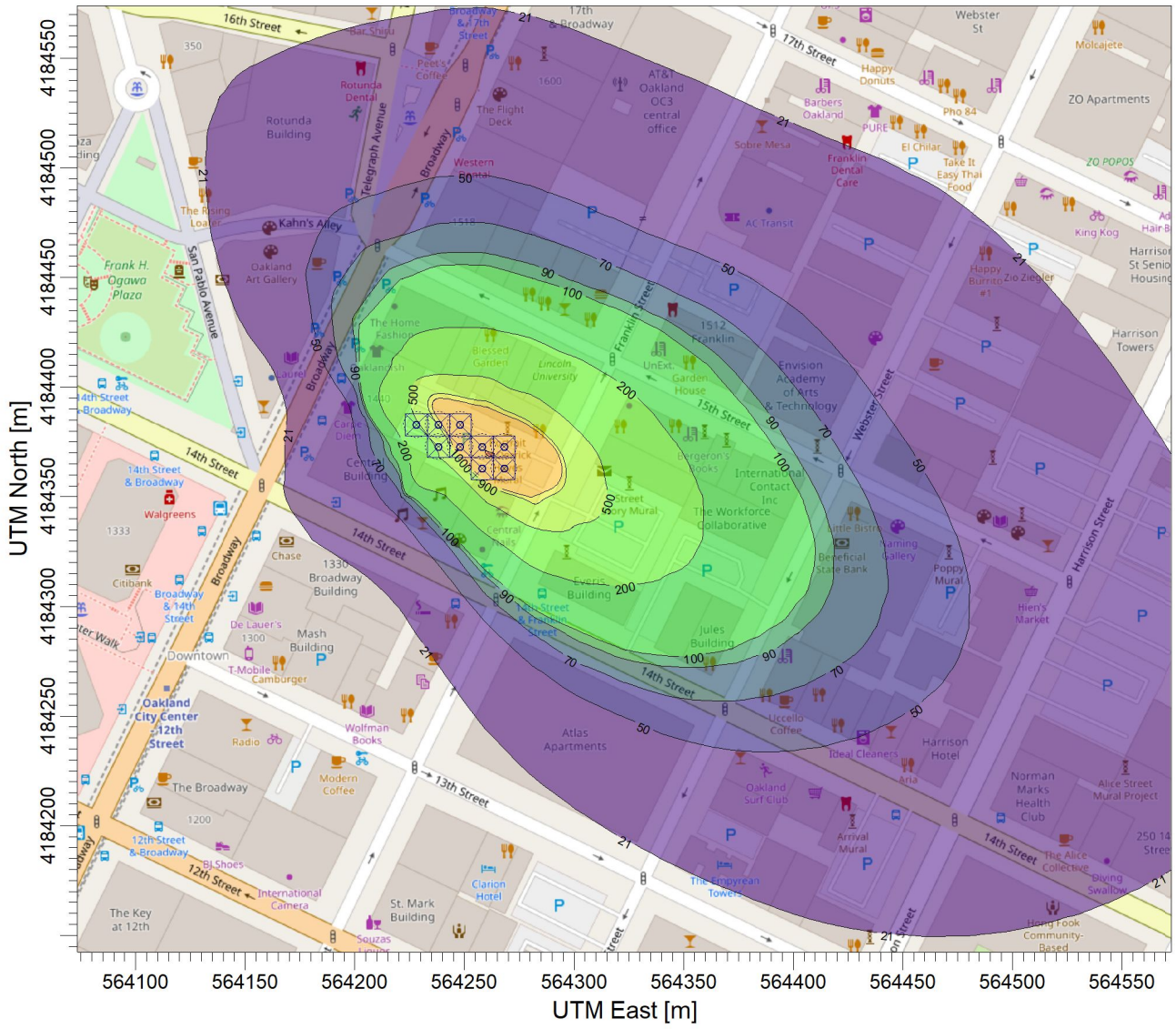
Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0550	0.2460	0.1403	2.6000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Total	**0.0550**	**0.2460**	**0.1403**	**2.6000e-004**		**8.0900e-003**	**8.0900e-003**		**8.0900e-003**	**8.0900e-003**	**0.0000**	**25.5325**	**25.5325**	**3.5800e-003**	**0.0000**	**25.6219**

11.0 Vegetation

PROJECT TITLE:

1431 Franklin Residential and Office scenarios



PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2065 [ug/m^3] at (564260.69, 4184369.50)

21 50 70 90 100 200 500 900 1000 2000 2065

COMMENTS:	SOURCES: **9**	COMPANY NAME:	
	RECEPTORS: **1681**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:3,140 0 0.1 km	
	MAX: **2065 ug/m^3**	DATE: **9/18/2020**	PROJECT NO.:

Summary of ISCST3 Model Parameters, Assumptions, and Results for DPM and $PM_{2.5}$ Emissions during Construction

ISCST3 Model Parameters and Assumptions			
Source Type	**Units**	**Value**	**Notes**
Volume Source: Off-Road Equipment Exhaust			
Hours/Work Day	hours/day	11.33	Construction hours are limited to 7AM-7PM M-F, 9AM-5PM Saturday
DPM Emission Rate	gram/second	0.002208	Exhaust PM_{10} from off-road equipment
Number of Sources	count	9	SMAQMD, 2015
Emission Rate/Source	gram/second	0.000245	Scaling factor is (1/Emission Rate) to convert result from ISCST3
Release Height	meters	5.0	SMAQMD, 2015
Length of Side	meters	10.0	SMAQMD, 2015
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015

ISCST3 Model Results			
Sensitive Receptor	**Pollutant**	**Annual Average Concentration**	**Notes**
MEIR	DPM ($\mu g/m^3$)	0.1357	Nearest residential receptor under the unmitigated scenario
	$PM_{2.5}$ ($\mu g/m^3$)	0.1275	Nearest residential receptor under the unmitigated scenario
	DPM ($\mu g/m^3$)	0.0224	Nearest residential receptor under the mitigated scenario
	$PM_{2.5}$ ($\mu g/m^3$)	0.0211	Nearest residential receptor under the mitigated scenario
MEIS	DPM ($\mu g/m^3$)	0.0192	Nearest school receptor under the unmitigated scenario
	$PM_{2.5}$ ($\mu g/m^3$)	0.0180	Nearest school receptor under the unmitigated scenario
	DPM ($\mu g/m^3$)	0.0032	Nearest school receptor under the mitigated scenario
	$PM_{2.5}$ ($\mu g/m^3$)	0.0030	Nearest school receptor under the mitigated scenario

Notes:

DPM = diesel particulate matter

PM_{10} = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

$PM_{2.5}$ = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

$\mu g/m^3$ = micrograms per cubic meter

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County* . June.

Summary of Health Risk Assessment at MEIR for DPM Emissions during Construction

Health Risk Assessment Parameters and Results					
DPM Emissions without SCA-AIR-1					
Inhalation Cancer Risk Assessment for DPM	**Units**	**Age Group**			**Notes**
		3rd Trimester	**0-2 Years**	**2-9 Years**	
DPM Concentration (C)	$\mu g/m^3$	0.136	0.136	0.136	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	861	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose	mg/kg/day	0.000047	0.000142	0.000112	$C*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	0.75	Based on total construction period of 36 months
Averaging Time (AT)	years	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	0.72	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	1.57	37.88	2.85	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	42.31			At MEIR location
Hazard Index for DPM	**Units**	**Value**	**Notes**		
Chronic REL	$\mu g/m^3$	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.03	At MEIR location		
DPM Emissions with SCA-AIR-1					
Inhalation Cancer Risk Assessment for DPM	**Units**	**Age Group**			**Notes**
		3rd Trimester	**0-2 Years**	**2-9 Years**	
DPM Concentration (C)	$\mu g/m^3$	0.022	0.022	0.022	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	861	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose	mg/kg/day	0.000008	0.000023	0.000019	$C*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	2.00	0.75	Based on total construction period of 36 months
Averaging Time (AT)	years	70	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	0.72	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.26	6.27	0.47	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	6.53			At MEIR location
Hazard Index for DPM	**Units**	**Value**	**Notes**		
Chronic REL	$\mu g/m^3$	5.0	OEHHA, 2015		
Chronic Hazard Index for DPM	unitless	0.0045	At MEIR location		

Notes:

DPM = diesel particulate matter

REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

MEIR = maximum exposed individual resident

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

Summary of Health Risk Assessment at MEIS for DPM Emissions during Construction

Health Risk Assessment Parameters and Results			
DPM Emissions without SCA-AIR-1			
Inhalation Cancer Risk Assessment for DPM	**Units**	**Age Group 2-16 years**	**Notes**
DPM Concentration (C)	$\mu g/m^3$	0.019	ISCST3 Annual Average
Worker Adjustment Factor (WAF)	unitless	2.5	11.33 h/day, 6 days per week work schedule
Daily Breathing Rate (DBR)	L/kg-8 Hr	520	95th percentile, moderate intensity (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.49	180 days/365 days. Minimum amount of instructional days per schoo
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	Conversion of µg to mg and L to m^3
Dose	mg/kg/day	0.000012	$C*WAF*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	3.00	Based on total construction period of 36 months
Averaging Time (AT)	years	70	70 years for residents (OEHHA, 2015)
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	1.74	D*CPF*ASF*ED/AT*CF (OEHHA, 2015)
Hazard Index for DPM	**Units**	**Value**	**Notes**
Chronic REL	$\mu g/m^3$	5.0	OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.00	At MEIS location
DPM Emissions with SCA-AIR-1			
Inhalation Cancer Risk Assessment for DPM	**Units**	**Age Group 2-16 Years**	**Notes**
DPM Concentration (C)	$\mu g/m^3$	0.003	ISCST3 Annual Average
Worker Adjustment Factor (WAF)	unitless	2.5	11.33 h/day, 6 days per week work schedule
Daily Breathing Rate (DBR)	L/kg-day	520	95th percentile, moderate intensity (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.49	180 days/365 days. Minimum amount of instructional days per school year (CA)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	Conversion of µg to mg and L to m^3
Dose	mg/kg/day	0.000002	$C*WAF*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	3	OEHHA, 2015
Annual Exposure Duration (ED)	years	3.00	Based on total construction period of 36 months
Averaging Time (AT)	years	70	70 years for lifetime exposure (OEHHA, 2015)
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.29	D*CPF*ASF*ED/AT*CF (OEHHA, 2015)
Hazard Index for DPM	**Units**	**Value**	**Notes**
Chronic REL	$\mu g/m^3$	5.0	OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.0006	At MEIS location

Notes:

DPM = diesel particulate matter

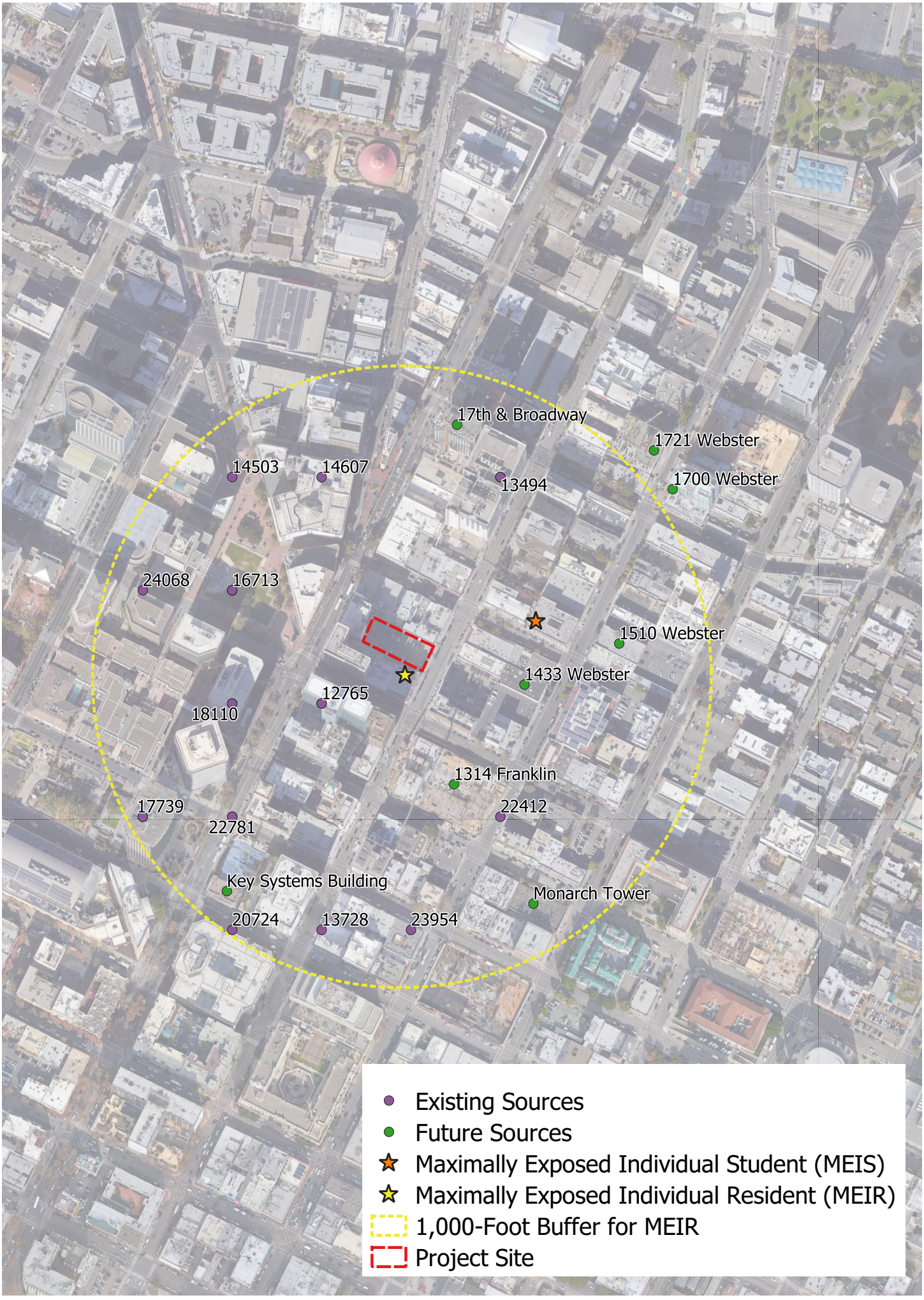
REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day


17th & Broadway
1721 Webster
14503
14607
13494
1700 Webster
24068
16713
1510 Webster
1433 Webster
12765
18110
1314 Franklin
17739
22412
22781
Key Systems Building
Monarch Tower
20724
13728
23954
Existing Sources
Future Sources
Maximally Exposed Individual Student (MEIS)
Maximally Exposed Individual Resident (MEIR)
1,000-Foot Buffer for MEIR
Project Site

ATTACHMENT H: SUMMARY OF CULTURAL RESOURCES WITHIN A 0.25-MILE RADIUS

ATTACHMENT H: SUMMARY OF CULTURAL RESOURCES WITHIN A ONE-QUARTER MILE RADIUS .

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
250 10th St	2-71-1	LR	N/A	Ba3+	1853	L: Oakland Square		Y
388 12th St	2-57-7	PDHP	API Downtown Historic	Cb-1+	1912	N/A		N
392 12th St	2-57-8	LR	API Downtown Historic	B-a1+	1907	N/A		Y
260-320 13th St	2-67-1	LR	N/A	A3	1910-12	L: Hotel Oakland		Y
330 13th St	2-65-90	LR	ASI Hotel Menlo Group	C2+	1920	N/A	P-01-004568; P-01-008497	Y
363 13th St	2-570-30-1	LR	API Downtown Historic	B+1+	1929	N/A		Y
375 13th St	2-57-2	LR	API Downtown Historic	B+1+	1906-1908	N/A		Y
393 13th St	2-57-1	PDHP	API Downtown Historic	*c1-	1950-52	N/A		N
401 13th St	2-51-3	LR	ASI Hotel Menlo Group	B+2+	1913-14	N/A		Y
409 13th St	2-51-2	LR	API Downtown Historic	A1+	1906	L: Bruener Co. Oakland Tribune Building		Y
420 13th St	2-53--6	PDHP	API Downtown Historic	Cb-1+	1910-11	N/A		N
428 13th St	2-53-12	LR	API Downtown Historic	A1+	1903-1905	N/A		Y
347 14th St	2-53-1	PDHP	API Downtown Historic	*b+1-	1956-1959	N/A		Y
376 14th St	8-624-39	LR	API Downtown Historic	B+1+	1928	N/A		Y
405 14th St	8-624-4	n/a	API Downtown Historic	B+1+	1928	N/A		Y
436 14th St	8-621-11	LR	API Downtown Historic	A1+	1925-26	N/A		Y
560 14th St	3-69-15	LR	API Downtown Fringe	B+a1+	1914			Y

[1] LR indicates listed on Local historic register. PDHP indicates identified as Potential Designated Historic Property.

[2] This columns indicates whether the property is designated as an Oakland City Landmark (L), as a Heritage property (H), or has a Mills Act contract (M, year of contract).

[3] Presence of a CHRIS Primary Number indicates resources that were included in NWIC records search results.

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
568 14th St	3-69-16	PDHP	API Downtown Fringe	Ec1*	1911-12			N
584 14- St	3-69-17	LR	API Downtown Fringe	B*1+	1913-14	N/A		Y
315 15th St	8-625-43	LR	API Coit Building Group	B-1+	1924	N/A		Y
389 15th St	8-624-32	LR	ASI 15th and Webster St	B+2+	1923	N/A		Y
401 15th St	8-621-6	LR	API Downtown Historic	A1+	1921-22	L: Oakland Title Ins. Co. Bldg.		Y
405 15th St	8-621-5	PDHP	API Downtown Historic	C1+	1922	N/A		N
417 15th St	8-621-3	PDHP	API Downtown Historic	C1+	1903	N/A		N
421 15th St	8-621-2	LR	API Downtown Historic	Cb+1+	1924	N/A		Y
422 15th St	8-622-4	PDHP	API Downtown Historic	Db+1*	1924	N/A		N
425 15th St	8-621-8-4	PDHP	API Downtown Historic	Ec1*	1919	N/A		N
449 15th St	8-621-1	LR	API Downtown Historic	*b+1+	1947-48	N/A		Y
587 15th St	3-69-13	PDHP	API Downtown Fringe	Cb+1+	1912-1913	N/A		N
510 16th St	8-620-06	LR	API Downtown Historic	B+a1+	1919	M: 2011		Y
532 16th St	8-62-1	PDHP	API Downtown Historic	C1+	1906	N/A		N
300 17th St	8-625-9	PDHP	API 17th St Commercial	Cb-1+	1924	N/A		N
333 17th St	8-625-19	LR	API 17th St Commercial	A1+	1925	L: Robt. A Howden Bldg		Y
359 17th St	8-624-18	PDHP	API 17th St Commercial	C1+	1924	N/A		N
378 17th St	8-624-09	PDHP	API 17th St Commercial	C1+	1927	N/A		N
394 17th St	8-624-1	LR	API 17th St Commercial	B+1+	1923	N/A		Y
426 17th St	8-623-8	LR	API 17th St Commercial	B+3	1924			Y
457 17th St	8-64-12	PDHP	API Downtown Historic	Cb-1+	1922-23			N
464 19th St	8-639-4	LR	API Uptown Commercial	B*1+	1923-24	N/A		Y

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
1428 Alice St	8-627-24	LR	API Lakeside Apartment	A1+	1927-28	L: Malonga Casquelourd Center for the Arts (Women's City Club, Alice Arts Center)	P-01-004125	Y
1443 Alice St	8-626016	LR	API Lakeside Apartment	B+1+	1927	N/A	P-01-010865	Y
1449 Alice St	8-626015	PDHP	API Lakeside Apartment	C1+	1922-23	N/A		N
1450 Alice St	8-627025	LR	API Lakeside Apartment	A1+	1915-16	N/A		Y
1461 Alice St	8-626014	LR	API Lakeside Apartment	B+1+	1913	N/A		Y
1515 Alice St	8-626-11	LR	API Lakeside Apartment	B-1+	1913-14	N/A		Y
1519 Alice St	8-626-10	PDHP	API Lakeside Apartment	Cb-1+	1912-13	N/A		N
1100 Broadway	2-51-17	LR	API Downtown Historic	A1+	1911-12	N/A	P-01-003848	Y
1212 Broadway	2-51-5	LR	API Downtown Historic	A1+	1907-08	N/A		Y
1226 Broadway	2-51-1	LR	API Downtown Historic	C1+	1935-36	N/A		Y
1330 Broadway	2-53-2	LR	API Downtown Historic	A1+	1928-29	L: Financial Building	P-01-003855	Y
1440 Broadway	8-621-8-6	LR	API Downtown Historic	A1+	1910-11	N/A		Y
1500 Broadway	8-622-5-1	LR	API Downtown Historic	B+a1+	1922-23	L: Roos Bros. Store Bldg.	P-01-003862	Y
1615 Broadway	8-731-1	LR	API Downtown Historic	A1+	1913-14	L: Fed. Realty Co Pierce Building M: 2010		Y
1617 Broadway	8-640-16	PDHP	API Downtown Historic	Dc1+	1928	N/A		N

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
1628 Broadway	8-640-15	PDHP	API Downtown Historic	C1+	1924	N/A		N
1634 Broadway	8-640-14	PDHP	API Downtown Historic	Ec1*	1924	N/A		N
1636 Broadway	8-640-13	PDHP	API Downtown Historic	Cb-1+	1923	N/A		N
1715 Broadway	8-640-10	PDHP	API Uptown Commercial	Cb+1+	1931			N
1741 Broadway	8-640-6	PDHP	API Uptown Commercial	C1+	1930	N/A		N
1750 Broadway	8-640-1	PDHP	API Uptown Commercial	Cb+1+	1931	N/A		N
1755 Broadway	8-740-3	PDHP	API Uptown Commercial	C1+	1923-24	N/A		N
1759 Broadway	8-640-4	PDHP	API Uptown Commercial	Ca1+	1928	N/A		N
1763 Broadway	8-640-3	LR	API Uptown Commercial	B-1+	1941	N/A		Y
1770 Broadway	8-623-1	LR	API Uptown Commercial	B-1+	1911	N/A		Y
1775 Broadway	8-64-2	PDHP	API Uptown Commercial	Ec1*	1932	N/A		N
1900 Broadway	8-638-5-2	LR	API Uptown Commercial	Cb+1+	1922-23	N/A		Y
1915 Broadway	8-639-3	PDHP	API Uptown Commercial	*d1+	1945	N/A		N
1414 Clay St	3-67-4	LR	N/A	A1+	1911-14	N/A		Y
1529 Clay St	3-69-6	LR	API Downtown fringe	B+1+	1913-14	N/A		Y
1605 Clay St	3-63-13	LR	API Downtown fringe	B+a1+	1907	N/A		Y

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
1611 Clay St	3-63-12	PDHP	API Downtown fringe	Cb+1+	1923	N/A		N
1625 Clay St	3-63-18	LR	API Downtown fringe	A1+	1922	N/A		Y
150 Frank H Ogawa Plaza	8-619-8-1	LR	API Downtown Historic	A1+	1907-08	N/A		Y
300 Frank H Ogawa Plaza	8-619-4-1	LR	API Downtown Historic	A1+	1913-14	L: Rotunda Bldg.	P-01-005849	Y
350 Frank H Ogawa Plaza	8-619-1-1	LR	API Downtown Historic	A1+	1913-14	N/A		Y
1305 Franklin St	2-53-3-1	PDHP	API Downtown Historic	Dc1*	1924-25	N/A		N
1404 Franklin St	8-624-41	LR	API Downtown Historic	B+1+	1923	N/A		Y
1441 Franklin St	8-621-7	PDHP	API Downtown Historic	C1+	1924	N/A		N
1511 Franklin St	8-622-2	PDHP	API Downtown Historic	Ec1*	1915	N/A		N
1521 Franklin St	8-622-13	LR	N/A	B+1+	1918	N/A		Y
1624 Franklin St	8-624-31	LR	API 17th St Commercial	B+3	1927	N/A		Y
1701 Franklin St	8-623-7	LR	N/A	A3	1900-02	N/A		Y
1736 Franklin St	8-624-16	PDHP	API Leamington Hotel Group	Cb+1+	1926	N/A	p-01-004165	N
1814 Franklin St	8-624-1-1	LR	API Leamington Hotel Group	A1+	1925-26	L: Leamington Hotel and Annex	p-01-004165	Y
1904 Franklin St	8-637-13-1	LR	API Leamington Hotel Group	B+1+	1922-23	N/A		Y

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
1511 Franklin St	8-622-2	PDHP	API Downtown Historic	Ec1*	1915	N/A		N
1521 Franklin St	8-622-13	LR	N/A	B+1+	1918	N/A		Y
Harrison Street (no address)	2-63-3	PDHP	API King Building Group	C1+	1904-1922			N
1261 Harrison St	2-63-2	LR	API King Building Group	C1+	1916			Y
1415 Harrison St	8-625-45	LR	API Coit Building Group	B+1+	1914		P-01-008497	Y
1425 Harrison St	8-625-44	PDHP	API Coit Building Group	Cb-1+	1916		P-01-008497	N
1418 Jefferson St	3-69-18	PDHP	API Downtown Fringe	C1+	1912			N
1424 Jefferson St	3-69-12	PDHP	API Downtown Fringe	C1+	1912-13			N
1611 Telegraph Ave	8-620-05	LR	API Downtown Historic	B+a1+	1925-26	N/A		Y
1627 Telegraph Ave	8-620-04	PDHP	API Downtown Historic	C1+	1924	N/A		N
1628 Telegraph Ave	8-640-15	PDHP	API Downtown Historic	C1+	1924	N/A		N
1631 Telegraph Ave	8-620-03	PDHP	API Downtown Historic	Dc1+	1892-93	N/A		N
1634 Telegraph Ave	8-640-14	PDHP	API Downtown Historic	Ec1*	1924	N/A		N
1635-1637 Telegraph Ave	8-620-02	PDHP	API Downtown Historic	Ec1+	1922	N/A		N

Address	APN	LR or PDHP[1]	API or ASI	OCHS Rating	Year Built	Other Historic Status[2]	CHRIS Primary #[3]	CEQA Historical Resource
1636 Telegraph Ave	8-640-13	PDHP	API Downtown Historic	Cb-1+	1923			N
1645 Telegraph Ave	8-620-01	PDHP	API Downtown Historic	Dc1+	1922	N/A		N
1807 Telegraph Ave	8-642-16	LR	API Uptown Commercial	A1+	1927-28	L: Fox West Coast Oakland Theater		Y
1816 Telegraph Ave	8-640-1	PDHP	API Uptown Commercial	Ec1*	1914	N/A		N
1101 Webster St	2-57-14	PDHP	ASI 12th and Webster Group	Ec2*	1906-07	N/A	P-01-001040	N
1115 Webster St	2-57-13	PDHP	ASI 12th and Webster Group	Cb-2+	1905	N/A	P-01-001041	N
1127 Webster St	2-57-12	LR	ASI 12th and Webster Group	B*2+	1911	N/A	P-01-001042	Y
1214 Webster St	2-63-5	LR	API King Building Group	B-1+	1922	N/A		Y
1218 Webster St	2-63-1	LR	API King Building Group	B*1+	1906-1907	N/A		Y
1415 Webster St	8-624-38	PDHP	API Downtown Historic	Db-1+	1916	N/A	P-01-001044	N
1464 Webster St	8-625-42	LR	ASI 15th and Webster St	A2+	1924-1925	Mrs. A.E. White Building	P-01-004570	Y
1515 Webster St	8-624-47	LR	ASI 15th and Webster St	A2+	N/A	L: YWCA Bldg.		Y
1608 Webster St	8-625-39	LR	ASI 17th and Webster St Group	B+a2+	1924	N/A		Y
1734 Webster St	8-625-15	LR	N/A	B+3	1926-27	N/A		Y

ATTACHMENT I: TRAFFIC NOISE OUTPUTS

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

15th Street between Broadway and Franklin Street C+P PM (Resi)

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	120.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	5.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.8

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

15th Street between Broadway and Franklin Street E (Resi)

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	81.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	3.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	53.3

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

15th Street between Broadway and Franklin Street E PM (Resi)

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	85.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	4.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	53.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

15th Street between Broadway and Franklin Street E+P (Resi)

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	96.0
Average automobile speed (mph):	30.0
Medium truck volume (v/h):	4.0
Average medium truck speed (mph):	30.0
Heavy truck volume (v/h):	1.0
Average heavy truck speed (mph):	30.0
Bus volume (v/h):	0.0
Average bus speed (mph):	0.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	54.0

ATTACHMENT J: TRANSPORTATION DEMAND MANAGEMENT AND NON-CEQA MEMOS

FEHR PEERS

Draft Memorandum

Date: December 19, 2022

To: Brandon Northart, Urban Planning Partners

From: Jordan Brooks and Sam Tabibnia, Fehr & Peers

Subject: 1431 Franklin Street Residential Project – Transportation and Parking Demand Management Plan

OK20-0370

Transportation and Parking Demand Management (TDM) plans are a requirement of the City of Oakland's Standard Conditions of Approval (Department of Planning and Building, Bureau of Planning, Revised January 24, 2020 – Section 77) for all land use projects generating more than 50 net new peak hour vehicle trips as described in the City of Oakland's *Transportation Impact Review Guidelines* (TIRG) dated April 2017.

The proposed 1431 Franklin Street residential project is required to prepare a TDM Plan because it would generate more than 50 peak hour trips. Since the project would generate fewer than 100 peak hour trips, the TDM Plan goal is to achieve a 10 percent vehicle trip reduction (VTR).

This memorandum describes the project and its setting and lists the mandatory TDM strategies that the project shall implement to achieve the 10 percent VTR.

Project Description

The project site is located on the west side of Franklin Street between 14th and 15th Streets in Downtown Oakland. The project would consist of 381 multifamily dwelling units on a site currently used for a 81-space public surface parking lot. The project would provide 167 parking spaces in a five-level garage accessed through a left-in/left-out only driveway on Franklin Street.

Project Location

The proposed project is in Downtown Oakland, a high-density, transit-rich, pedestrian-friendly area with limited parking supply. Pedestrian, bicycle, and transit access between the site and nearby commercial areas is good: there are continuous sidewalks throughout the area, and bikeways connect the project site to adjacent commercial areas. The proposed project is two blocks from the

12th Street City Center BART Station and within easy walking distance of several bus routes, including AC Transit's trunk routes 1T, 6, 51A, and 72/72M/72R, as well as numerous local, night, and Transbay buses, and the "Free B," Oakland's free downtown circulator shuttle. The Franklin Street Protected Bikeway project currently in the planning phase would provide a two-way protected bicycle facility adjacent to the project on the west side of Franklin Street, further encouraging the use of non-automobile modes of travel.

The project's location is expected to result in a relatively high rate of pedestrian, bicycle, and transit trips. This is evidenced in part by the travel patterns of the area's existing workers, per the US Census. Based on US Census data, **Table 1** summarizes the transportation mode split for employed residents' journey to work, and **Table 2** summarizes vehicle ownership for employed residents in the project vicinity. Only 57% of households have one or more vehicles at home, and only 35% of employed residents drive or carpool to work, while 45% take public transit, and 20% either walk or bike to work or work from home.

Table 1: Journey to Work for Employed Residents in the Project Vicinity

Transportation Mode	Percent of Employed Residents
Drive Alone	31%
Carpool	4%
Public Transportation	45%
Bicycle	2%
Walk	14%
Work from Home	4%
Total	**100%**

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates, Alameda County Census Tracts 4028, 4029, 4030, 4031, and 4034, Table B08006.

Table 2: Vehicle Ownership for Renter Households in the Project Vicinity

Vehicles Available	Percent of Renter Households
No vehicle available	43%
1 vehicle available	46%
2 vehicles available	9%
3+ vehicles available	2%
Total	**100%**

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates, Alameda County Census Tracts 4028, 4029, 4030, 4031, and 4034, Table B25044.

Table 3 shows the project trip generation by travel mode as summarized in the project Transportation Impact Review (TIR) Memorandum per the City of Oakland's TIRG.

As shown in Table 3, the automobile trips generated by the project are estimated to be slightly more than half of all trips generated by a typical suburban development. Similarly, as discussed in the project environmental document, the VMT per resident in the project area is about 30 percent of the regional VMT per resident, with about 4.5 average VMT for the project area, compared to the regional average VMT of 15.0.

Table 3: Project Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	0.531	920	83	79
Transit	0.297	620	47	45
Bike	0.051	90	9	8
Walk	0.105	190	17	16
	Total Trips	**1,720**	**156**	**148**

Notes:

1. Based on *City of Oakland TIRG*, for an urban environment within 0.5 miles of a BART station.

Source: Fehr & Peers, 2022.

Mandatory TDM Strategies

This section describes the mandatory strategies that shall be implemented as part of the proposed project. These strategies shall be directly implemented by the project applicant and building management. The City of Oakland Standard Conditions of Approval lists infrastructure and operational strategies that must be incorporated into a TDM plan based on project location and development characteristics. **Table 4** presents these strategies and indicates their applicability to the proposed project.

Table 4: Mandatory TDM Program Components as Required by the Oakland TIRG

TDM Strategy	Required When	Required for Project?
Bus boarding bulbs or islands	• A bus boarding bulb or island does not already exist, and a bus stop is located along the project frontage; and/or • A bus stop along the project frontage serves a route with 15 minutes or better peak hour service and has a shared bus-bike lane curb	No, a bus stop is not located along the project frontage
Bus shelter	• A stop with no shelter is located within the project frontage, or • The project is located within 0.10 miles of a flag stop with 25 or more boardings per day	No, a bus stop is not located along the project frontage, and a flag stop is not within 0.10 miles of the project
Concrete bus pad	• A bus stop is located along the project frontage and a concrete bus pad does not already exist	No, a bus stop is not located along the project frontage
Curb extensions or bulb-outs	• Identified as an improvement within site analysis	No, curb extensions are not identified as improvements in the site analysis
Implementation of a corridor-level bikeway improvement	• A buffered Class 2 or Class 4 bikeway facility is in a local or county adopted plan within 0.10 miles of the project location; and • The project would generate 500 or more daily bicycle trips	No, the project would not generate 500 or more daily bicycle trips
Implementation of a corridor-level transit capital improvement	• A high-quality transit facility is in a local or county adopted plan within 0.25 miles of the project location; and • The project would generate 400 or more peak period transit trips	No, the project would not generate 400 or more peak period transit trips
Installation of amenities such as lighting; pedestrian-oriented green infrastructure, trees, or other greening landscape; and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan	• Always required	**Yes, the project would upgrade the pedestrian amenities adjacent to the site**

Table 4: Mandatory TDM Program Components as Required by the Oakland TIRG

TDM Strategy	Required When	Required for Project?
Installation of safety improvements identified in the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.)	• When improvements are identified in the Pedestrian Master Plan along project frontage or at an adjacent intersection	**Yes, the project would provide enhanced crosswalks and directional curb ramps at the Franklin Street/15th Street intersection.**
In-street bicycle corral	• A project includes more than 10,000 square feet of ground floor retail, is located along a Tier 1 bikeway, and on-street vehicle parking is provided along the project frontages.	No, the project does not include more than 10,000 square feet of ground floor retail
Intersection improvements, including but not limited to visibility improvements, shortening corner radii, pedestrian safety islands, accounting for pedestrian desire lines.	• Identified as an improvement within site analysis	**Yes, the project would provide enhanced crosswalks and directional curb ramps at the Franklin Street/15th Street intersection.**
New sidewalk, curb ramps, curb and gutter meeting current City and ADA standards	• Always required	**Yes, the project would upgrade the sidewalks along project frontage**
No monthly permits and establish minimum price floor for public parking	• If proposed parking ratio exceeds 1:1000 sf (commercial)	No, the project would not include a commercial component
Parking garage is designed with retrofit capability	• Optional if proposed parking ratio exceeds 1:1.25 (residential) or 1:1000 sf (commercial)	No, the project would not provide off-street parking exceeding 1:1.25
Parking space reserved for car share	• If a project is providing parking and a project is located within downtown. One car share space reserved for buildings between 50 – 200 units, then one car share space per 200 units.	**Yes, the project would provide two car share spaces in the project garage**
Paving, lane striping or restriping (vehicle and bicycle), and signs to midpoint of street section	• Typically required	**Yes, the project would update the paving and striping along the project frontage to midpoint of the street section**

Table 4: Mandatory TDM Program Components as Required by the Oakland TIRG

TDM Strategy	Required When	Required for Project?
Pedestrian crossing improvements, pedestrian-supportive signal changes, including but not limited to reducing signal cycle lengths to less than 90 seconds to avoid pedestrian crossings against the signal, providing a leading pedestrian interval, provide a "scramble" signal phase where appropriate.	• Identified as an improvement within site analysis • Identified as an improvement within operations analysis	No, pedestrian-supportive signal improvements were not identified as improvements in the site analysis.
Real-time transit information system	• A project frontage block includes a bus stop or BART station and is along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	No, the project is not adjacent to a BART station or a bus stop
Relocating bus stops to far side	• A project is located within 0.10 mile of any active bus stop that is currently near-side	No, the existing bus stops at the Franklin Street/14th Street intersection will be relocated by the 14th Street Safety Project.
Signal upgrades, including typical traffic lights, pedestrian signals, bike actuated signals, transit only signals	• Project size exceeds 100 residential units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage abuts an intersection with signal infrastructure older than 15 years	**Yes, the project would coordinate with the Franklin Street Protected Bikeway Project to identify signal improvements at the Franklin Street/15th Street intersection**
Transit queue jumps	• Identified as a needed improvement within operations analysis of a project with frontage along a Tier 1 transit route with 2 or more routes or peak period frequency of 15 minutes or better	No, the project does not have frontage along any transit routes
Trenching and placement of conduit for providing traffic signal interconnect	• Project size exceeds 100 units, 80,000 sf of retail, or 100,000 sf of commercial; and • Project frontage block is identified for signal interconnect improvements as part of a planned ITS improvement; and • A major transit improvement is identified within operations analysis requiring traffic signal interconnect	No, major transit improvements have not been identified in an operations analysis requiring traffic signal interconnect

Table 4: Mandatory TDM Program Components as Required by the Oakland TIRG

TDM Strategy	Required When	Required for Project?
Unbundled parking	• If proposed parking ratio exceeds 1:1.25 (residential)	**Yes, the project would provide unbundled parking**

Sources: City of Oakland Standard Conditions of Approval as of January 2020 and summarized by Fehr & Peers, 2022

Table 5 describes all mandatory TDM strategies for the proposed project and the effectiveness of each strategy primarily based on research compiled in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association [CAPCOA], August 2020). The CAPCOA report is a resource for local agencies to quantify the benefit, in terms of reduced travel demand, of implementing various TDM strategies.

The mandatory strategies in Table 5 are generally targeted at project residents. While some of these strategies would also affect the travel behavior of visitors and building employees, these groups are not directly targeted with TDM programs because the number of building employees would be small relative to the number of residents and visitors would likely not be aware of TDM programs or visit frequently enough to make them cost effective. However, some mandatory strategies could benefit site visitors and employees.

The VTR estimates in Table 5 represent conservative assumptions about potential trip reduction at the low end of the range. It is expected that the high end of the VTR range would be achieved with this TDM plan due to the project's location in an area that has good transit, bicycle, and pedestrian access.

The TDM strategies include both one-time physical improvements and on-going operational strategies. Physical improvements will be constructed as part of the project and are therefore anticipated to have a one-time capital cost. Some level of ongoing maintenance cost may also be required for certain improvements. Operational strategies provide on-going incentives and support for the use of non-auto transportation modes. These TDM measures have monthly or annual costs and will require on-going management.

Table 5: Mandatory TDM Plan Components

TDM Strategy	Description	Estimated Vehicle Trip Reduction[1]
A. Infrastructure Improvements	Various improvements	N/A[2]
B. Limited Parking Supply	Project would provide 0.55 parking spaces per unit, less than auto ownership of 0.7 vehicles in the project area	8%-15%[3]
C. Unbundled Parking	Residents are required to pay for a parking space separately from their monthly rent	
D. Residential Parking Management	Restrict most on-site parking to a maximum of one parking space per unit, thereby discouraging multiple car ownership	
E. Carshare Parking Spaces	Offer to dedicate two on-site carshare parking spaces	<1%
F. Bicycle Parking Supply and Monitoring	Provide bicycle parking above the minimum requirement and monitor usage of the bicycle parking facilities	<1%
G. Transit Fare Subsidy	Provide a monthly transit subsidy to project residents[4]	5%-10%
H. Carpool and Ride-Matching Assistance	Assist project residents and employees in forming carpools	<1%
I. TDM Coordinator	Coordinator responsible for implementing and managing the TDM Plan	1-2%
J. Marketing and Education	Active marketing of carpooling, BART, AC Transit, bikesharing, and other non-auto modes	
	Total Estimated Vehicle Trip Generation	**14% – 28%**

Notes:

1. The focus of the CAPCOA document is reductions to VMT but the research used to generate the reductions also indicates vehicle trip reductions are applicable as well. For the purposes of this analysis the VTR is assumed to equal the VMT reduction. See the cited CAPCOA research for more information and related information on page 8 of the BAAQMD *Transportation Demand Management Tool User's Guide* (June 2012).
2. The effectiveness of this strategy cannot be quantified at this time. This does not necessarily imply that the strategy is ineffective. It only demonstrates that at the time of the CAPCOA report development, existing literature did not provide a robust methodology for calculating its effectiveness. In addition, many strategies are complementary to each other and isolating their specific effectiveness may not be feasible.
3. CAPCOA document suggest that limited parking supply can result in up to 20% VTR. However, the CAPCOA results assume minimal other parking facilities in the area. Thus, the CAPCOA-based results are adjusted because on-street parking and paid off-street parking is available in the project area.
4. Assuming a subsidy of about $2.15 per residential unit per weekday (value to transit user).

Source: Fehr & Peers, 2022.

A more detailed description of the TDM measures that comprise the mandatory TDM Plan is provided below:

A. *Infrastructure Improvements* – the following infrastructure improvements in the vicinity of the project, as recommended in the Project TIR or required by the TIRG would improve the bicycling, walking, and transit systems in the area and further encourage the use of these modes:

1. Providing at least the minimum long-term and short-term bicycle parking required, with short-term bicycle parking in the form of bicycle racks along the project frontage on Franklin Street within 50 feet of the main entrance to the building and highly visible from the street.
2. Providing direct access between the long-term bicycle parking area and the building lobby.
3. Paving and striping along the project frontage to the midpoint of the street section.
4. Upgrading the sidewalks and pedestrian amenities adjacent to the site.
5. Coordinating with the City's Franklin Street Protected Bikeway project to identify signal improvements at the Franklin Street/15th Street intersection and along the building frontage, including improvements to facilitate or modify vehicle access to site across the two-way protected bikeway.
6. Coordinating with City of Oakland to ensure:
    - Adequate sight distance between motorists entering and exiting the driveway and cyclists in both directions of the bicycle facility
    - Appropriate signage and striping in and around the driveway conflict zone with the bicycle facility
    - Appropriate staging locations for attended parking and passenger loading/unloading
7. Implementing the following if determined feasible by City of Oakland staff:
    - Provide directional curb ramps with truncated domes at all corners of the Franklin Street/15th Street intersection.
    - Support the partial closure of 15th Street at Franklin Street by providing pedestrian improvements, such as a partial traffic diverter or raised crosswalk.

B. *Limited Parking Supply* – The Project would provide 0.51 off-street automobile parking spaces per unit. This is less than the current average automobile ownership of 0.7 automobile per household in the project area, as shown in Table 2. Therefore, it is expected that the Project would result in a higher overall rate of residents in Downtown Oakland using non-automobile travel modes. Thus, this analysis assumes that the limited on-site parking supply would result in a five to ten percent VTR.

C. *Unbundle Parking* – Building management shall unbundle parking costs from housing costs (as required by Oakland Municipal Code, Section 17.116.310) for the residential component of the project. This would result in residents paying one price for the residential unit and a separate price for parking, should they opt for a space. The price of a parking space can be adjusted so that resident parking demand matches the project's parking supply.

D. *Residential Parking Management* – Building management shall restrict the non-tandem parking spaces to one parking space per unit or less, thereby discouraging multiple car ownership and/or use for most project residents. Exceptions will only be made for residents with management approved Reasonable Accommodation Requests. A Reasonable Accommodation Request shall need to demonstrate a hardship wherein a household requires more than one vehicle per unit. Examples could include households with multiple disabled residents requiring vehicles or households with multiple residents with places of work inaccessible via transit.

E. *Carshare Parking Spaces* – Building management shall offer to dedicate for free at least two on-site parking spaces to carsharing operators, such as Zipcar, for free. Monitor the usage of the carsharing spaces and adjust if necessary.

F. *Bicycle Parking Supply and Monitoring* – The project would include long-term on-site parking in a secure bicycle room and short-term parking in the form of bicycle racks. Building management shall monitor the usage of these facilities and provide additional bicycle parking, if necessary.

G. *Transit Fare Subsidy* – Provide a monthly transit benefit to each dwelling unit as required by Oakland Municipal Code, Section 17.116.105. Options may include:

    1. Participate in AC Transit's Easy Pass Program, where Building Management will purchase an annual Easy Pass per unit for all units in the development
    2. Offer to provide a regular Adult 31-Day AC Transit Pass at half the price to each unit (Pass is valued at $84.60 as of December 2022) that requests one
    3. Offer to provide a monthly Clipper Card contribution of about $43 to each unit that requests one

H. *Carpool and Ride-Matching Assistance Program* – Building management shall offer personalized ride-matching assistance to pair residents and/or workers interested in forming commute carpools. As an enhancement, the project could use services such as Scoop, Enterprise RideShare, or 511.org RideShare.

I. *On-Site TDM Coordinator* – Building management shall designate an on-site TDM coordinator responsible for implementing and managing the TDM Plan. The TDM coordinator would also be responsible for ensuring that all residents, employees, and visitors are aware of their transportation options and would serve as a point of contact regarding the TDM program.

J. *Marketing and Education* – Site management shall provide residents and employees information about transportation options. This information would also be posted at central location(s) and be updated as necessary. This information shall include:

1. *Transit Routes* – Promote the use of transit by providing user-focused maps. These maps provide residents and employees with wayfinding to nearby transit stops and transit-accessible destinations and are particularly useful for those without access to portable mapping applications.
2. *Real-time Transit Information System* – The project should consider installing real-time transit information, such as TransitScreen, in a visible location to provide residents, employees, and visitors with up-to-date transit arrival and departure times.
3. *Transit Fare Discounts* – Provide information about local discounted fare options offered by BART and AC Transit, including discounts for youth, elderly, persons with disabilities, and Medicare cardholders.
4. *Car Sharing* – Promote accessible car sharing programs, such as Zipcar, and Getaround by informing residents and employees of nearby car sharing locations and applicable membership information.
5. *Ridesharing* – Provide residents and employees with phone numbers and contact information for ride sharing options including Uber, Lyft, and Oakland taxicab services.
6. *Carpooling* – Provide residents and employees with phone numbers and contact information for carpool matching services such as the Metropolitan Transportation Commission's 511 RideMatching.
7. *Walking and Biking Events* – Provide information about local biking and walking events, such as Oaklavia, as events are planned.
8. *Bikeshare/Scooters* – Educate residents and employees about nearby bike sharing station locations and membership information (nearest Bay Wheels bikeshare station is about 0.1 miles southwest of the project site on 13th Street, just west of Franklin Street) and dock-less bikeshare/scooters.

Monitoring, Evaluation and Enforcement

According to the City of Oakland's *Standard Condition of Approval #77*, projects generating more than 100 net new peak hour trips are required to submit an annual compliance report for the first five years following completion of the project for review and approval by the City. Since the proposed project would generate fewer than 100 net peak hour automobile trips, the project applicant is not required to submit an annual compliance report to the City.

Please contact Jordan Brooks (j.brooks@fehrandpeers.com or 510-587-9429) with questions or comments.

FEHR PEERS

Draft Memorandum

Date: December 19, 2022

To: Brandon Northart, Urban Planning Partners

From: Jordan Brooks and Sam Tabibnia, Fehr & Peers

Subject: 1431 Franklin Street Residential Project – Transportation Impact Review (Non-CEQA)

OK20-0372

This memorandum summarizes the non-CEQA transportation assessment that Fehr & Peers completed for the 1431 Franklin Street residential project. Some information in the CEQA document is repeated in this memorandum to provide context for the non-CEQA analysis. The information provided in this memorandum is based on the City of Oakland's *Transportation Impact Review Guidelines* (TIRG) published in April 2017. Sections in this memorandum include:

Project Description

The proposed project is located on the west side of Franklin Street between 14th and 15th Streets in Downtown Oakland. The project would consist of 381 multifamily residential units on a site currently used for an 81-space public surface parking lot. The project would provide 167 parking spaces in a five-level garage accessed through a left-in/left-out only driveway on Franklin Street, which would also provide access to the project loading space. The project would provide short- and long-term bicycle parking on the ground level.

Trip Generation

Trip generation is the process of estimating the number of vehicles that would likely access the project on any given day. **Table 1** presents the trip generation for project. Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual (11th Edition)* was used as a starting point to estimate the vehicle trip generation.

Table 1: Project Automobile Trip Generation

Land Use	ITE Code	Size[1]	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential[2]	221	381 DU	1,730	36	121	157	91	58	149
Non-Auto Reduction[3]			-810	-17	-57	-74	-43	-27	-70
Net New Automobile Trips			***920***	***19***	***64***	***83***	***48***	***31***	***79***

Notes:
1. DU = Dwelling Units.
2. ITE Trip Generation (11th Edition) land use category 221 (Multifamily Housing (Mid-Rise) in General Urban/Suburban Setting):
    Daily: T = 4.54 * (X)
    AM Peak Hour: T = 0.44 * (X) (23% in, 77% out)
    PM Peak Hour: T = 0.39 * (X) (61% in, 39% out)
3. Reduction of 46.9% based on the City of Oakland's Transportation Impact Review Guidelines for a development in an urban environment within 0.5 miles of a BART station.
Source: Fehr & Peers, 2022.

ITE's *Trip Generation Manual (11th Edition)* is primarily based on data collected at single-use suburban sites where the automobile is often the only travel mode. However, the project site is in a dense, mixed-use urban environment adjacent to frequent regional and local transit service, where many trips are walk, bike, or transit trips. Since the project is about 0.1 miles from the 12th Street Oakland BART station, this analysis reduces the ITE-based trip generation by 47 percent to account for the non-automobile trips. This adjustment is consistent with the City of Oakland's TIRG and is based on US Census commute data for Alameda County from the 2014 5-Year Estimates of the American Community Survey (ACS), which shows that the non-automobile mode share for urban areas within 0.5 miles of a BART station is about 47 percent.

As shown in Table 1, the project is estimated to generate about 920 daily, 83 AM peak hour, and 79 PM peak hour automobile trips.

Non-Automobile Trip Generation

Consistent with the City of Oakland's TIRG, **Table 2** presents the project trip generation estimates for all travel modes for the project.

Table 2: Project Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	0.531	920	83	79
Transit	0.297	620	47	45
Bike	0.051	90	9	8
Walk	0.105	190	17	16
	Total Net Trips	**1,720**	**156**	**148**

Notes:

1. Based on the City of Oakland's TIRG for an urban environment within 0.5 miles of a BART station.

Source: Fehr & Peers, 2022.

Trip Distribution, Assignment, and Study Intersection Selection

The trip distribution and assignment process is used to estimate how the vehicle trips generated by the project would be distributed across the roadway network. Based on existing travel patterns, locations of complementary land uses, and the one-way street network and turn restrictions in Downtown Oakland, Fehr & Peers estimated directions of approach to and departure from the project site. **Figure 1** shows the resulting peak hour trip distribution. Trips generated by the project were assigned to the roadway network according to the trip distribution shown on Figure 1.

According to the City of Oakland's TIRG, the criteria for selecting study intersections include:

- All intersection(s) of streets adjacent to project site;
- All signalized intersection(s), all-way stop-controlled intersection(s) or roundabouts where 100 or more peak hour trips are added by the project;
- All signalized intersection(s) with 50 or more project-related peak hour trips and existing LOS D-E-F; and
- Side-street stop-controlled intersection(s) where 50 or more peak hour trips are added by the project to any individual movement other than the major-street through movement.

Following the above criteria, the following two intersections were selected because they are adjacent to the project site:

1. 14th Street/Franklin Street
2. 15th Street/Franklin Street

The project would not add 50 or more peak hour trips to any other intersections

Due to changes in travel patterns resulting from the COVID-19 pandemic, current turning movement counts may not accurately reflect typical conditions. Instead, intersection counts previously collected at the study intersections within five years prior to the finalization of the scope of this project were used to analyze the project. **Table 3** summarizes the project source and date of count collection for the study intersections. **Appendix A** provides the intersection turning movement count data.

Table 3: Existing Count Sources

#	Intersection	Source	Collection Date
1	14th Street/Franklin Street	1314 Franklin Street CEQA Analysis	October 26, 2016
2	15th Street/Franklin Street	1433 Webster Street CEQA Analysis	February 23, 2016

Source: Fehr & Peers, 2020.

Site Access and Circulation Analysis

Fehr & Peers reviewed the project site plan and the existing street network adjacent to the project site to evaluate safety, access, and circulation for all travel modes. This analysis provides recommendations to improve access and circulation, including relevant improvements identified in recent transportation assessments for nearby projects.

Automobile Access and Circulation

The project would provide a five-level parking garage accommodating 167 parking spaces, including 12 tandem spaces, one accessible space and two carshare spaces. Automobiles would access the garage via a driveway on Franklin Street about 150 feet south of 15th Street. As Franklin Street is a one-way northbound street, vehicles would enter the project site by turning left into the parking garage. Similarly, vehicles would exit the garage by turning left onto Franklin Street heading north.

The project driveway would be on the north side of the project site. The driveway would be approximately 24 feet wide and provide one inbound lane and one outbound lane.

Building features on either side of the driveway may obscure exiting motorists' views of pedestrians on the adjacent sidewalk and not provide adequate sight distance. Adequate sight distance is defined as a clear line-of-sight between a motorist ten feet back from the sidewalk and a pedestrian 10 feet away on each side of the driveway.

> **Recommendation 1:** Provide mirrors at the garage driveway so that exiting vehicles can see pedestrians walking along Franklin Street in either direction.

The ground level parking area provides a truck loading space in addition to six automobile parking spaces. The Off-Street Loading section of the memorandum describes truck access for the project.

Internal circulation in the garage would be provided by a single two-way drive aisle with parking spaces on both sides. Section 17.116.210 of the Oakland Municipal Code requires a minimum drive aisle width of 21 feet for residential facilities with perpendicular parking. The drive aisle for the ground through fifth levels would be about 21 feet wide, with perpendicular parking on either one or both sides of the drive aisle, which meets code requirements and would provide adequate space for vehicles to maneuver into and out of the parking spaces considering the low turnover of the spaces due to the residential use of the project.

The City of Oakland plans to implement a two-way protected bicycle facility on the west side of Franklin Street adjacent to the project site. The bicycle facility would be protected from vehicle traffic by concrete islands, painted buffer zones, and parallel-parked vehicles. Although design plans for the project have not been developed, it is expected that the design would remove one travel lane on Franklin Street, narrowing the street to two through northbound lanes. The City expects to design the project in 2023 and to implement it in 2025.

If the protected bike facility on Franklin Street is provided along the project frontage, bicycles traveling in both directions of the protected bike lanes may have a conflict with vehicles entering and exiting the project driveway. Since the existing parking lot at the project site provides a driveway on Franklin Street, the proposed project would not increase the number of conflict points compared to current conditions. However, the project driveway would be located approximately 30 feet north of the existing driveway. If the Franklin Street protected bicycle facility is constructed prior to this project, the project would need to make modifications to the bicycle facility to align vehicle access with the project driveway.

Recommendation 2: Coordinate with City of Oakland to ensure:

- Adequate sight distance between motorists entering and exiting the driveway and cyclists in both directions of the bicycle facility
- Appropriate signage and striping in and around the driveway conflict zone with the bicycle facility
- Appropriate staging locations for attended parking and passenger loading/unloading

Automobile Parking Requirements

The City of Oakland Municipal Code sets minimum and maximum parking requirements. According to Section 17.116.060 of the code, multifamily residential developments in the Central Business District Pedestrian Retail Commercial Zone (CBD-P) are not required to provide parking and have a parking space maximum of 1.25 spaces per dwelling unit.

Table 4 presents the off-street automobile parking requirements for the proposed project. The project is required to provide between zero and 438 parking spaces. The project would provide 167 off-street parking spaces, meeting code requirements.

Table 4: Automobile Parking Requirements

Land Use	Size[1]	Required Off-Street Parking Supply		Provided Off-Street Parking Supply	Within Range?
		Minimum	Maximum		
Residential[2]	381 DU	0	438	167	Yes

Notes:
1. DU = Dwelling Unit
2. The City of Oakland does not have a minimum off-street parking requirement for multifamily residential developments in the CBD-P zone and allows a maximum of 1.25 spaces per dwelling unit (Section 17.116.060).

Source: Fehr & Peers, 2022.

The City of Oakland Municipal Code Section 17.116.105 requires a minimum of two carshare parking spaces for multifamily residential developments between 201 and 400 units in the CBD and LM zones. The project would provide two carshare spaces on the ground level, meeting code requirements.

Accessible Parking

The California Building Code (CBC) requires accessible parking spaces to be provided when parking is provided for new buildings. According to CBC Section 11B-208.2, parking facilities with 151 to 200 spaces are required to provide six accessible parking spaces, including one van accessible space. The project site plan designates one accessible parking space, which does not meet code requirements.

> **Recommendation 3:** Provide at least six accessible parking spaces, including one van accessible space. Ensure that all accessible parking spaces provide the shortest accessible route to an accessible entrance and are arranged so that people with disabilities are not directed to wheel or walk behind parked vehicles other than their own.

Off-Street Loading

City of Oakland Municipal Code Section 17.116.120 requires one off-street loading space with minimum dimensions of 23 feet long, 10 feet wide, and 12 feet high for residential uses with greater than 50,000 square feet of floor area. The project would provide one loading space with the dimensions noted above, meeting code requirements for the number and dimensions of loading spaces.

The project loading area would be located at the ground level in the garage and would be accessed via the driveway on Franklin Street, which is shared with passenger vehicles. The loading area would provide adequate space for trucks to maneuver into and out of the loading space.

On-Street Parking and Loading

Adjacent to the project site, Franklin Street provides on-street parking spaces along both sides of the street. These spaces are metered with a one-hour time limit between 8:00 AM and 6:00 PM on weekdays and Saturdays.

As described earlier, the Franklin Street Protected Bikeway project would reallocate curb space on the west side of Franklin to provide a protected bicycle facility. Depending on the final design for the project, some or all on-street parking may be eliminated to provide protection for the bicycle facility.

The City of Oakland provides the following on-street loading designations:

- Commercial loading spaces with yellow curb paint, which allow loading and unloading of passengers and materials between 7:00 AM and 6:00 PM Monday through Saturday. Passenger loading and unloading operations are limited to three minutes; commercial loading is limited to 30 minutes for vehicles with commercial license plates.
- Passenger loading spaces with white curb paint, which allow loading and unloading of passengers between 7:00 AM and 6:00 PM Monday through Sunday. Passenger loading and unloading operations are generally limited to three minutes. In some places, such as adjacent to public assembly spaces, white curb parking restrictions are always in effect.

Franklin Street provides no on-street commercial (yellow curb) or passenger (white curb) loading spaces along the curb adjacent to the project site. It is expected that all commercial loading would occur at the designated loading area within the project building. The project site plan does not designate an area for passenger loading.

> **Recommendation 4:** Explore the feasibility and, if determined feasible by City of Oakland staff, designate two spaces (forty feet) of space as white curb to accommodate passenger loading on the west side of Franklin Street adjacent or near the project site. Coordinate with the planned protected bicycle lanes on the west side of Franklin Street.

Bicycle Access and Bicycle Parking

Chapter 17.117 of the City of Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures, and short-term bicycle parking includes bicycle racks. For multifamily residential uses, Section 17.117.090 requires one long-term space for every four dwelling units and one short-term space

for every 20 dwelling units, with a minimum requirement of two long-term and two short-term spaces.

Table 5 presents the bicycle parking requirements for the project. The project is required to provide a minimum of 88 long-term and 18 short-term bicycle parking spaces. The project would provide 96 long-term and 20 short-term bicycle parking spaces, meeting code requirements.

Table 5: Bicycle Parking Requirements

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit[2]	Spaces	Spaces per Unit[2]	Spaces
Residential	381 DU	1:4 DU	88	1:20 DU	18
Total Bicycle Spaces Provided			96		20
Bicycle Parking Met?			**Yes**		**Yes**

Notes:
1. DU = dwelling units
2. Based on Oakland Municipal Code Section 17.117.090.

Source: Fehr & Peers, 2022.

Long-term bicycle parking would be provided in a secure bicycle room on the ground level, accessible through the parking garage.

> **Recommendation 5:** Explore the feasibility, and implement if feasible, of providing direct access between the long-term bicycle parking area and the building lobby.

Short-term bicycle parking would be provided inside the project parking garage. City of Oakland Municipal Code Section 17.117.070 requires short-term bicycle parking to be placed within 50 feet of the main entrance to the building and be highly visible from the street.

> **Recommendation 6:** Provide short-term bicycle parking in the form of bicycle racks along the project frontage on Franklin Street within 50 feet of the main entrance to the building and highly visible from the street.

Currently, a northbound Class 2 bicycle lane is provided on the east side of Franklin Street adjacent to the project. In the project vicinity, a southbound Class 2 buffered bicycle lane is provided on Webster Street, one block east of the project site. No bicycle parking is currently provided along the project frontage on Franklin Street.

The City of Oakland is in the planning phase of the Franklin Street Protected Bikeway project, which would provide a two-way protected bicycle facility on the west side of Franklin Street along the project frontage. The bicycle facility would be protected from vehicle traffic by concrete islands, painted buffer zones, and parallel-parked vehicles.

Recommendation 7: Coordinate with the City's Franklin Street Protected Bikeway project to identify signal improvements at the Franklin Street/15th Street intersection and along the building frontage, including improvements to facilitate or modify vehicle access to and from the site across the two-way protected bikeway.

The 14th Street Safety Project was approved in June 2022, with construction expected to begin in early 2023. The 14th Street Safety Project will provide protected bicycle lanes and bicycle and pedestrian intersection safety enhancements on 14th Street between Brush Street and Lake Merritt.

In addition, the City's 2019 Oakland Bike Plan (*Let's Bike Oakland*, May 2019) proposes the following in the vicinity of the project:

- Class 2 bicycle lanes on 15th Street
- Class 2 buffered bicycle lanes on 13th and 17th Streets
- Class 4 protected bicycle lanes on Webster and Harrison Streets

The nearest Bay Wheels bikeshare station is located about 0.1 miles southwest of the project site on 13th Street, just west of Franklin Street.

Pedestrian Access and Circulation

Primary pedestrian access would be provided via the building lobby entrance on Franklin Street. Dwelling units would be accessed via elevators along the south wall of the lobby. A stairwell in the southeast corner of the building would also provide pedestrian access.

Franklin Street currently provides a 12-foot sidewalk along the project frontage, which would be maintained with the project. Occasional signposts and parking meters adjacent to the street narrow the sidewalk to a minimum of 10 feet.

Pedestrian facilities at the intersections nearest to the site include:

- The signalized Franklin Street/14th Street intersection provides standard crosswalk markings and pedestrian signal heads with countdown timers for all approaches. The southeast corner of the intersection provides directional curb ramps with truncated domes. The other three corners provide diagonal curb ramps without truncated domes.
- The signalized Franklin Street/15th Street intersection provides diagonal curb ramps on all four corners and standard crosswalk markings at all four approaches. All curb ramps, except for the southwest ramp, provide truncated domes. Pedestrian signal heads are provided for all crossings.

At the Franklin Street/14th Street intersection, the 14th Street Safety Project would provide directional curb ramps with truncated domes at all four corners, concrete barrier islands on the northeast and northwest corners to reduce pedestrian exposure to vehicle traffic while crossing the

street, and intersection islands to slow turning vehicles, among other pedestrian safety enhancements.

> **Recommendation 8:** Explore the feasibility and, if determined feasible by City of Oakland staff, provide directional curb ramps with truncated domes at all corners of the Franklin Street/15th Street intersection. Coordinate with the City of Oakland to potentially augment the partial closure of 15th Street at Franklin Street.

Transit Access

Transit service providers in the project vicinity include Bay Area Rapid Transit (BART) and Alameda Contra Costa Transit District (AC Transit). BART provides regional rail service throughout the East Bay and across the San Francisco Bay. The project is located about 0.1 miles from the 12th Street Oakland City Center BART Station. The nearest station portal to the project site is on the north side of 14th Street, just east of Broadway.

AC Transit is the primary bus service provider in the City of Oakland. AC Transit operates the following routes in the vicinity of the project:

- Lines 1T, 6, 12, 18, 33, 51A, 72, 72M, 72R, 800, 802, 805, 840, 851, and NL have stops on or within 300 feet of Broadway between 17th and 20th Streets, approximately 0.2 miles northwest of the project site.
- Lines 14, 19, 20, 29, 40, 88, 96, as well as the routes mentioned above (except Line NL) have stops on or within 300 feet of Broadway between 12th and 14th Streets, approximately 0.1 miles southwest of the project site.
- Line 14 has stops on 14th Street at Franklin Street, less than 200 feet south of the project site. The 14th Street Safety Project would remove these stops.

The 14th Street Safety Project would provide bus boarding islands with enhanced bus stop amenities at stops along 14th Street between Brush Street and Lake Merritt.

Collision History Analysis

A five-year history (January 1, 2015 to December 31, 2019) of collision data in the project vicinity was obtained from the Statewide Integrated Traffic Records System (SWITRS) and was evaluated for this collision analysis. **Table 6** summarizes the collision data by type and location, and **Table 7** summarizes the collision data by severity and location.

As shown in Table 6, 15 collisions were reported during this five-year timeframe at the study intersections and along the roadway segment adjacent to the project frontage. The most common collision types were pedestrian-involved (40%) and broadside (20%) collisions. The most common primary collision factor was failure to follow traffic signals and signs (27%). As shown in Table 7, of the 15 reported collisions, 10 (67%) resulted in injuries and none resulted in fatalities.

The study locations reported a total of three bicycle-involved collisions in the five-year period. The Franklin Street Protected Bikeway and 14th Street A Great Route in the Town projects would improve bicycle safety at these intersections and along the Franklin Street corridor.

The Highway Safety Manual (HSM, Predictive Method - Volume 2, Part C) provides a methodology to predict the number of collisions for intersections and street segments based on their specific characteristics, such as vehicle and pedestrian volume, number of lanes, signal phasing, on-street parking, and number of driveways. **Table 8** presents the predicted collision frequencies for the two study intersections and study segment using the HSM Predictive Method for Urban and Suburban Arterials and compares the predicted collision frequencies with the actual reported collision frequencies. **Appendix C** provides the detailed predicted collision frequency calculation sheets based on the HSM methodology.

Intersections or roadway segments with collision frequencies greater than the predicted frequency are identified as locations that should be evaluated in greater detail for collision trends and potential modifications. As shown in Table 8, all study locations had a lower reported collision frequency than predicted by the HSM.

Table 6: Collisions by Type[1]

Location	Head-on	Sideswipe	Rear-End	Broadside	Hit Object	Pedestrian-Involved[2]	Bicycle-Involved[2]	Other	Total
Intersection									
14th Street/Franklin Street	0	2	1	3	0	3	3	0	11
15th Street/Franklin Street	1	0	0	0	0	3	0	0	4
Roadway Segment									
Franklin Street between 14th and 15th Streets	0	0	0	0	0	0	0	0	0
Total	**1**	**2**	**1**	**3**	**0**	**6**	**3**	**0**	**15**

Notes:

1. Based on SWITRS five-year collision data reported from January 1, 2015 to December 31, 2019
2. One collision at the 14th Street/Franklin Street intersection involved both a pedestrian and a bicyclist. That collision is therefore included in both the pedestrian-involved and bicycle-involved columns for that intersection.

Source: Fehr & Peers, 2022

Table 7: Summary of Injuries[1]

Location	Property Damage Only Collisions	Injury Collisions	Fatality Collisions	Total	Person-Injuries			
					Bike	Ped	Driver/ Passenger	Total
Intersection								
14th Street/Franklin Street	4	7	0	11	3	3	2	8
15th Street/Franklin Street	1	3	0	4	0	3	0	3
Roadway Segment								
Franklin Street between 14th and 15th Streets	0	0	0	0	0	0	0	0
Total	**5**	**10**	**0**	**15**	**3**	**6**	**2**	**11**

Notes:
1. Based on SWITRS five-year collision data reported from January 1, 2015 to December 31, 2019

Source: Fehr & Peers, 2022

Table 8: Predicted and Actual Crash Frequencies

Location	Predicted Crash Frequency[1] (per year)	Actual Crash Frequency[2] (per year)	Difference	Higher Than Predicted?
Intersection				
14th Street/Franklin Street	3.4	2.2	-1.2	No
15th Street/Franklin Street	1.3	0.8	-0.5	No
Roadway Segment				
Franklin Street between 14th and 15th Streets	1.4	0.0	-1.4	No

Notes:
1. Based on the Highway Safety Manual Predictive Method (Volume 2, Part C). The Highway Safety Manual Predictive Method does not directly account for one-way roadway segments or intersections with one-way approaches. In this analysis, one-way crash frequencies are approximated to be equal to half of the crash frequency of a two-way divided road segment or four-leg intersection with double the one-way traffic volumes.
2. Based on SWITRS five-year collision data reported from January 1, 2015 to December 31, 2019.

Source: Fehr & Peers, 2022

Conclusion and Summary of Recommendations

Per the site plan review, the project would have adequate automobile, bicycle, pedestrian, and transit access and circulation with the inclusion of the following recommendations:

Recommendation 1: Provide mirrors at the garage driveway so that exiting vehicles can see pedestrians walking along Franklin Street in either direction.

Recommendation 2: Coordinate with City of Oakland to ensure:

- Adequate sight distance between motorists entering and exiting the driveway and cyclists in both directions of the bicycle facility
- Appropriate signage and striping in and around the driveway conflict zone with the bicycle facility
- Appropriate staging locations for attended parking and passenger loading/unloading

Recommendation 3: Provide at least six accessible parking spaces, including one van accessible space. Ensure that all accessible parking spaces provide the shortest accessible route to an accessible entrance and are arranged so that people with disabilities are not directed to wheel or walk behind parked vehicles other than their own.

Recommendation 4: Explore the feasibility and, if determined feasible by City of Oakland staff, designate two spaces (forty feet) of space as white curb to accommodate passenger

loading on the west side of Franklin Street adjacent or near the project site. Coordinate with the planned protected bicycle lanes on the west side of Franklin Street.

Recommendation 5: Explore the feasibility, and implement if feasible, of providing direct access between the long-term bicycle parking area and the building lobby.

Recommendation 6: Provide short-term bicycle parking in the form of bicycle racks along the project frontage on Franklin Street within 50 feet of the main entrance to the building and highly visible from the street.

Recommendation 7: Coordinate with the City's Franklin Street Protected Bikeway project to identify signal improvements at the Franklin Street/15th Street intersection and along the building frontage, including improvements to facilitate or modify vehicle access to and from the site across the two-way protected bikeway.

Recommendation 8: Explore the feasibility and, if determined feasible by City of Oakland staff, provide directional curb ramps with truncated domes at all corners of the Franklin Street/15th Street intersection. Coordinate with the City of Oakland to potentially augment the partial closure of 15th Street at Franklin Street.

Please contact Jordan Brooks (j.brooks@fehrandpeers.com or 510-587-9429) with questions or comments.

ATTACHMENTS

Figure 1 – Project Vehicle Trip Distribution

Appendix A – Existing Traffic Volume Counts

Appendix B – Predicted Crash Frequency Calculation Sheets

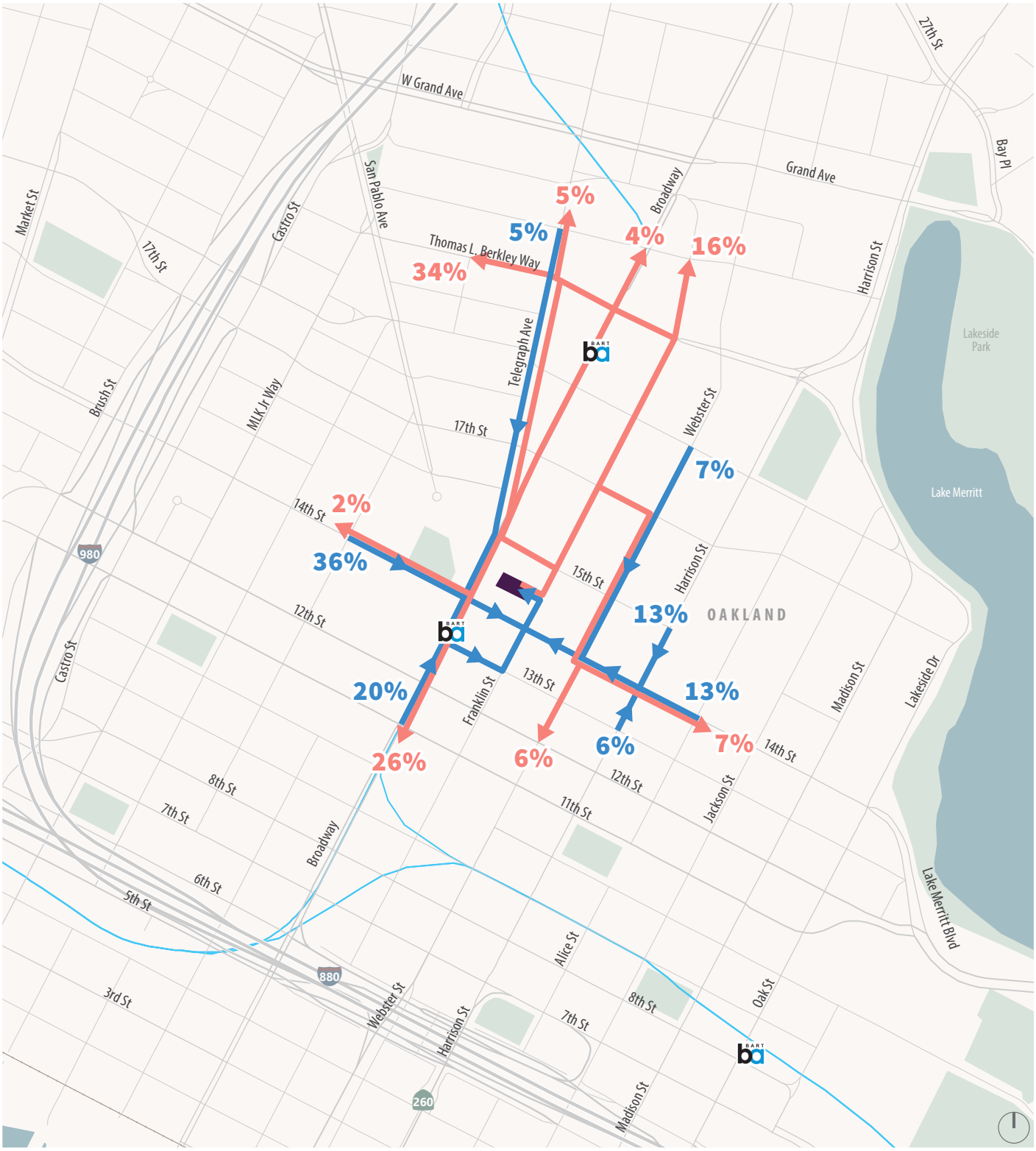


Figure 1

Project Trip Distribution

Appendix A:
Existing Traffic Volume Counts

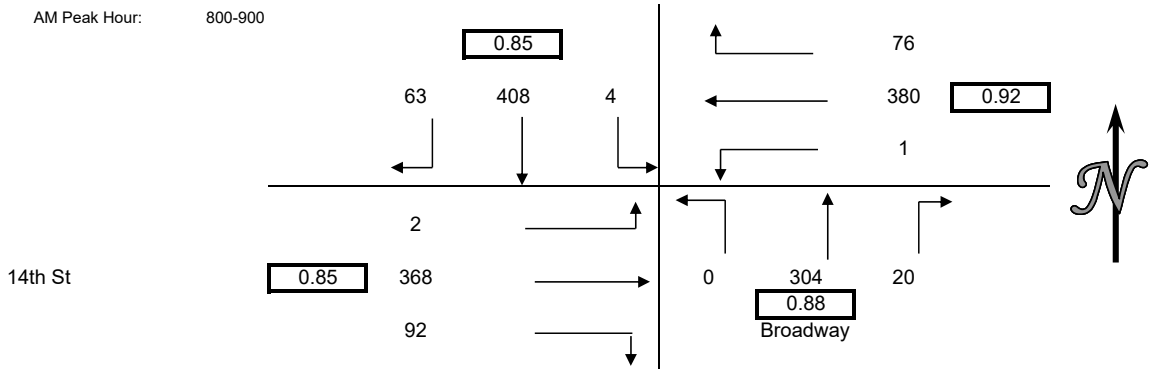
National Data and Surveying Services

INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		KIMLEY-HORN
PROJECT:		16-7871
DATE:		11/29/2016
PERIOD:		700 TO 900
		Weekday
INTERSECTION:	N/S	Broadway
	E/W	14th St
CITY:		City of Oakland

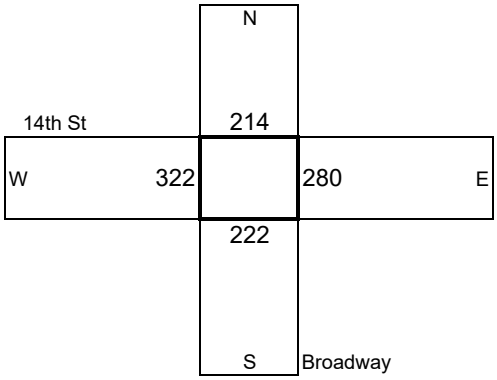
VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	10	38	0	9	42	0	1	51	0	14	31	2	198
715-730	7	60	0	10	44	0	7	66	0	14	37	2	247
730-745	7	76	0	15	68	2	4	63	1	9	39	0	284
745-800	13	103	0	16	75	0	7	88	0	13	67	1	383
800-815	16	104	1	18	80	0	4	88	0	14	82	0	407
815-830	14	101	1	19	92	1	2	62	0	25	100	1	418
830-845	10	88	1	22	102	0	6	82	0	24	80	0	415
845-900	23	115	1	17	106	0	8	72	0	29	106	1	478
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	37	277	0	50	229	2	19	268	1	50	174	5	1112
715-815	43	343	1	59	267	2	22	305	1	50	225	3	1321
730-830	50	384	2	68	315	3	17	301	1	61	288	2	1492
745-845	53	396	3	75	349	1	19	320	0	76	329	2	1623
800-900	63	408	4	76	380	1	20	304	0	92	368	2	1718



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	15	26	20	24	85
715-730	19	26	26	37	108
730-745	20	24	17	61	122
745-800	30	61	33	50	174
800-815	37	71	70	83	261
815-830	45	57	47	62	211
830-845	70	75	54	101	300
845-900	62	77	51	76	266
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	84	137	96	172	489
715-815	106	182	146	231	665
730-830	132	213	167	256	768
745-845	182	264	204	296	946
800-900	214	280	222	322	1038

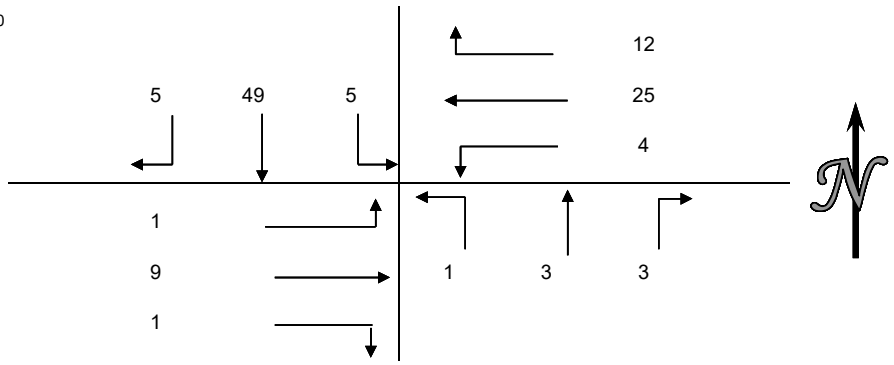


BICYCLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	0	4	1	2	0	0	0	2	0	2	0	1	12
715-730	0	8	3	1	4	1	0	0	0	0	0	2	19
730-745	2	3	2	0	4	1	0	1	1	0	1	0	15
745-800	2	9	1	1	4	0	0	2	0	0	1	0	20

800-815	0	14	1	1	2	0	0	0	0	0	2	0	20
815-830	1	12	0	3	8	1	1	2	0	0	4	1	33
830-845	1	10	2	5	8	2	1	0	1	0	0	0	30
845-900	3	13	2	3	7	1	1	1	0	1	3	0	35
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	4	24	7	4	12	2	0	5	1	2	2	3	66
715-815	4	34	7	3	14	2	0	3	1	0	4	2	74
730-830	5	38	4	5	18	2	1	5	1	0	8	1	88
745-845	4	45	4	10	22	3	2	4	1	0	7	1	103
800-900	5	49	5	12	25	4	3	3	1	1	9	1	118

AM Peak Hour: 800-900



National Data and Surveying Services

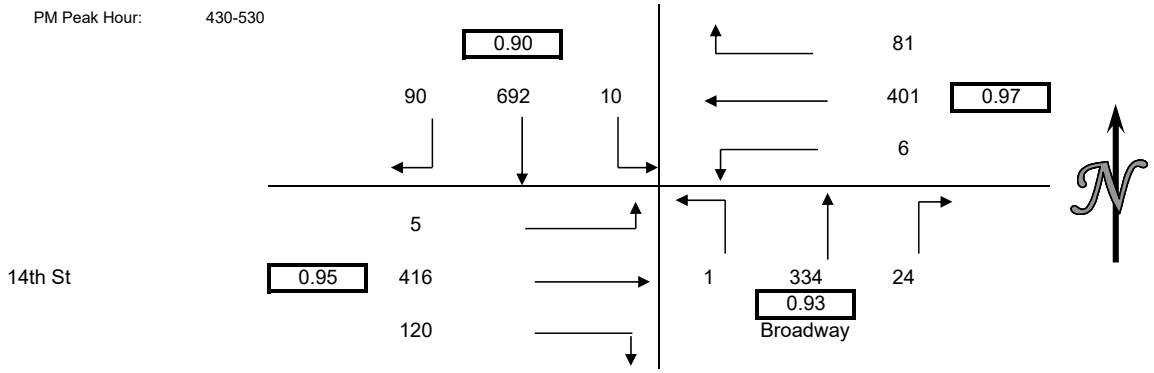
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		KIMLEY-HORN
PROJECT:		16-7871
DATE:		11/29/2016
PERIOD:		400 TO 600
		Weekday
INTERSECTION:	N/S	Broadway
	E/W	14th St
CITY:		City of Oakland

VEHICLE COUNTS

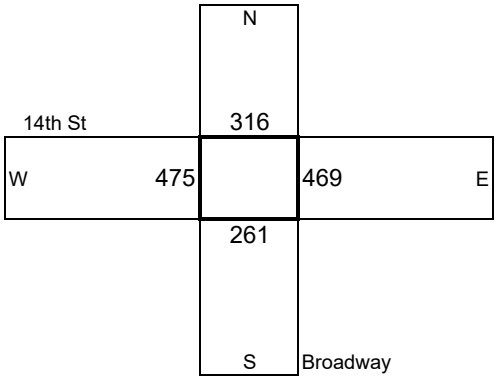
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	15	164	0	15	97	2	3	82	0	24	77	1	480
415-430	23	137	0	17	70	2	2	83	0	27	97	1	459
430-445	21	159	2	21	91	1	7	88	1	28	102	0	521
445-500	29	161	3	18	105	1	4	77	0	30	103	2	533
500-515	21	193	5	22	102	1	7	81	0	28	104	1	565
515-530	19	179	0	20	103	3	6	88	0	34	107	2	561
530-545	28	144	1	22	95	1	7	69	0	36	108	0	511
545-600	13	140	0	23	81	1	13	83	0	36	120	2	512
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	88	621	5	71	363	6	16	330	1	109	379	4	1993
415-515	94	650	10	78	368	5	20	329	1	113	406	4	2078
430-530	90	692	10	81	401	6	24	334	1	120	416	5	2180
445-545	97	677	9	82	405	6	24	315	0	128	422	5	2170
500-600	81	656	6	87	381	6	33	321	0	134	439	5	2149

PM Peak Hour: 430-530



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	66	103	77	132	378
415-430	83	128	100	114	425
430-445	79	121	62	111	373
445-500	69	108	64	117	358
500-515	72	110	68	112	362
515-530	96	130	67	135	428
530-545	62	99	72	81	314
545-600	81	103	67	120	371
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	297	460	303	474	1534
415-515	303	467	294	454	1518
430-530	316	469	261	475	1521
445-545	299	447	271	445	1462
500-600	311	442	274	448	1475

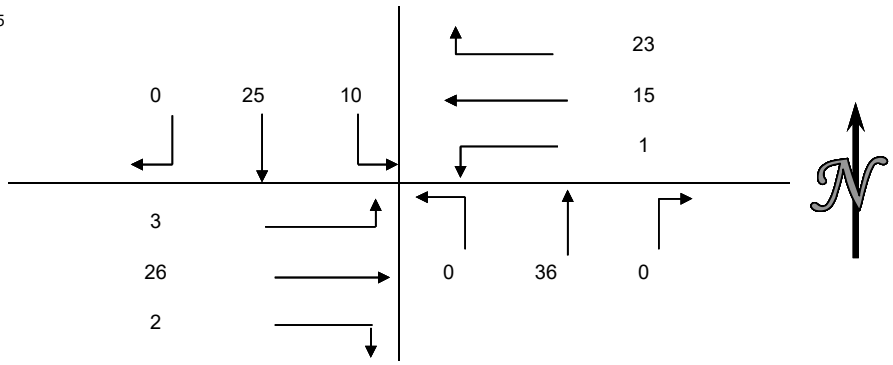


BICYCLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	1	2	1	0	1	0	0	7	0	0	5	0	17
415-430	2	6	1	0	4	0	1	1	0	1	2	3	21
430-445	0	8	4	3	2	0	0	12	0	0	5	1	35
445-500	0	6	5	7	6	0	0	7	0	1	7	0	39

500-515	0	7	0	6	4	1	0	9	0	1	5	2	35
515-530	0	4	1	7	3	0	0	8	0	0	9	0	32
530-545	0	5	1	4	5	0	0	10	0	0	12	0	37
545-600	0	5	4	2	3	0	1	11	0	0	4	0	30
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	3	22	11	10	13	0	1	27	0	2	19	4	112
415-515	2	27	10	16	16	1	1	29	0	3	19	6	130
430-530	0	25	10	23	15	1	0	36	0	2	26	3	141
445-545	0	22	7	24	18	1	0	34	0	2	33	2	143
500-600	0	21	6	19	15	1	1	38	0	1	30	2	134

PM Peak Hour: 445-545



ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7782-001 Franklin St & 14th St
Date : 10/26/2016

Unshifted Count = All Vehicles & Uturns

	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	44	10	0	54	1	20	1	0	22	11	29	0	0	40	116	0
7:15	0	0	0	0	0	0	57	7	0	64	7	25	2	0	34	4	37	0	0	41	139	0
7:30	0	0	0	0	0	0	75	11	0	86	5	26	1	0	32	17	48	0	0	65	183	0
7:45	0	0	0	0	0	0	83	18	0	101	5	32	5	0	42	11	49	0	0	60	203	0
Total	0	0	0	0	0	0	259	46	0	305	18	103	9	0	130	43	163	0	0	206	641	0
8:00	0	0	0	0	0	0	84	21	0	105	5	49	2	0	56	15	84	0	0	99	260	0
8:15	0	0	0	0	0	0	99	23	0	122	5	43	4	0	52	22	64	0	1	87	261	1
8:30	0	0	0	0	0	0	104	34	0	138	6	45	7	0	58	24	72	0	0	96	292	0
8:45	0	0	0	0	0	0	116	24	0	140	6	44	8	0	58	30	80	0	0	110	308	0
Total	0	0	0	0	0	0	403	102	0	505	22	181	21	0	224	91	300	0	1	392	1121	1
16:00	0	0	0	0	0	0	82	19	0	101	20	48	6	0	74	16	71	0	0	87	262	0
16:15	0	0	0	0	0	0	78	18	0	96	23	34	8	0	65	8	72	0	1	81	242	1
16:30	0	0	0	0	0	0	87	12	0	99	23	34	13	0	70	9	76	0	0	85	254	0
16:45	0	0	0	0	0	0	78	19	0	97	20	50	8	0	78	21	84	0	0	105	280	0
Total	0	0	0	0	0	0	325	68	0	393	86	166	35	0	287	54	303	0	1	358	1038	1
17:00	0	0	0	0	0	0	91	15	0	106	21	49	17	0	87	15	108	0	0	123	316	0
17:15	0	0	0	0	0	0	91	19	0	110	19	53	18	0	90	20	130	0	1	151	351	1
17:30	0	0	0	0	0	0	80	19	0	99	22	52	17	0	91	12	135	0	0	147	337	0
17:45	0	0	0	0	0	0	92	11	0	103	19	46	7	0	72	23	113	0	1	137	312	1
Total	0	0	0	0	0	0	354	64	0	418	81	200	59	0	340	70	486	0	2	558	1316	2
Grand Total	0	0	0	0	0	0	1341	280	0	1621	207	650	124	0	981	258	1252	0	4	1514	4116	4
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	82.7%	17.3%	0.0%		21.1%	66.3%	12.6%	0.0%		17.0%	82.7%	0.0%	0.3%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.6%	6.8%	0.0%	39.4%	5.0%	15.8%	3.0%	0.0%	23.8%	6.3%	30.4%	0.0%	0.1%	36.8%	100.0%	

AM PEAK HOUR	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	0	0	0	0	84	21	0	105	5	49	2	0	56	15	84	0	0	99	260
8:15	0	0	0	0	0	0	99	23	0	122	5	43	4	0	52	22	64	0	1	87	261
8:30	0	0	0	0	0	0	104	34	0	138	6	45	7	0	58	24	72	0	0	96	292
8:45	0	0	0	0	0	0	116	24	0	140	6	44	8	0	58	30	80	0	0	110	308
Total Volume	0	0	0	0	0	0	403	102	0	505	22	181	21	0	224	91	300	0	1	392	1121
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	79.8%	20.2%	0.0%		9.8%	80.8%	9.4%	0.0%		23.2%	76.5%	0.0%	0.3%		
PHF	.000	.000	.000	.000	.000	.000	.869	.750	.000	.902	.917	.923	.656	.000	.966	.758	.893	.000	.250	.891	.910

PM PEAK HOUR	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	91	15	0	106	21	49	17	0	87	15	108	0	0	123	316
17:15	0	0	0	0	0	0	91	19	0	110	19	53	18	0	90	20	130	0	1	151	351
17:30	0	0	0	0	0	0	80	19	0	99	22	52	17	0	91	12	135	0	0	147	337
17:45	0	0	0	0	0	0	92	11	0	103	19	46	7	0	72	23	113	0	1	137	312
Total Volume	0	0	0	0	0	0	354	64	0	418	81	200	59	0	340	70	486	0	2	558	1316
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	84.7%	15.3%	0.0%		23.8%	58.8%	17.4%	0.0%		12.5%	87.1%	0.0%	0.4%		
PHF	.000	.000	.000	.000	.000	.000	.962	.842	.000	.950	.920	.943	.819	.000	.934	.761	.900	.000	.500	.924	.937

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7782-001 Franklin St & 14th St
Date : 10/26/2016

Bank 1 Count = Bikes & Peds

	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	2	0	33	2	0	3	0	10	3	1	1	0	12	2	0	4	0	7	4	11	62
7:15	0	0	0	26	0	0	4	0	11	4	0	0	0	16	0	0	2	0	10	2	6	63
7:30	0	0	0	41	0	0	6	2	14	8	1	1	0	19	2	0	4	0	9	4	14	83
7:45	0	0	0	63	0	0	13	0	15	13	0	0	0	21	0	0	1	0	13	1	14	112
Total	0	2	0	163	2	0	26	2	50	28	2	2	0	68	4	0	11	0	39	11	45	320
8:00	0	0	0	60	0	0	4	4	29	8	0	0	0	27	0	2	0	1	12	3	11	128
8:15	0	0	0	78	0	0	13	2	23	15	0	2	0	31	2	1	3	0	22	4	21	154
8:30	0	0	0	92	0	0	15	0	14	15	0	3	0	39	3	1	5	1	28	7	25	173
8:45	0	0	0	69	0	2	10	4	24	16	3	2	0	81	5	1	4	0	51	5	26	225
Total	0	0	0	299	0	2	42	10	90	54	3	7	0	178	10	5	12	2	113	19	83	680
16:00	0	1	0	36	1	2	3	1	9	6	2	3	1	34	6	2	8	0	29	10	23	108
16:15	1	0	0	67	1	0	5	3	18	8	0	1	0	30	1	0	4	0	33	4	14	148
16:30	0	0	0	63	0	0	2	2	34	4	4	6	0	30	10	0	6	0	31	6	20	158
16:45	1	0	0	57	1	0	6	0	33	6	2	4	0	51	6	0	10	0	32	10	23	173
Total	2	1	0	223	3	2	16	6	94	24	8	14	1	145	23	2	28	0	125	30	80	587
17:00	1	1	0	82	2	0	8	1	34	9	4	13	1	35	18	3	11	1	42	15	44	193
17:15	1	0	0	91	1	0	8	1	39	9	1	2	1	31	4	0	8	1	29	9	23	190
17:30	0	0	1	72	1	0	3	2	16	5	4	7	0	30	11	2	14	1	21	17	34	139
17:45	0	0	0	69	0	0	9	1	22	10	1	4	1	40	6	1	7	0	29	8	24	160
Total	2	1	1	314	4	0	28	5	111	33	10	26	3	136	39	6	40	3	121	49	125	682
Grand Total	4	4	1	999	9	4	112	23	345	139	23	49	4	527	76	13	91	5	398	109	333	2269
Apprch %	44.4%	44.4%	11.1%			2.9%	80.6%	16.5%			30.3%	64.5%	5.3%			11.9%	83.5%	4.6%				
Total %	1.2%	1.2%	0.3%		2.7%	1.2%	33.6%	6.9%		41.7%	6.9%	14.7%	1.2%		22.8%	3.9%	27.3%	1.5%		32.7%	100.0%	

AM PEAK HOUR	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	0	60	0	0	4	4	29	8	0	0	0	27	0	2	0	1	12	3	11
8:15	0	0	0	78	0	0	13	2	23	15	0	2	0	31	2	1	3	0	22	4	21
8:30	0	0	0	92	0	0	15	0	14	15	0	3	0	39	3	1	5	1	28	7	25
8:45	0	0	0	69	0	2	10	4	24	16	3	2	0	81	5	1	4	0	51	5	26
Total Volume	0	0	0	299	0	2	42	10	90	54	3	7	0	178	10	5	12	2	113	19	83
% App Total	0.0%	0.0%	0.0%			3.7%	77.8%	18.5%			30.0%	70.0%	0.0%			26.3%	63.2%	10.5%			
PHF	.000	.000	.000		.000	.250	.700	.625		.844	.250	.583	.000		.500	.625	.600	.500		.679	.798

PM PEAK HOUR	Franklin St Southbound					14th St Westbound					Franklin St Northbound					14th St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	1	0	82	2	0	8	1	34	9	4	13	1	35	18	3	11	1	42	15	44
17:15	1	0	0	91	1	0	8	1	39	9	1	2	1	31	4	0	8	1	29	9	23
17:30	0	0	1	72	1	0	3	2	16	5	4	7	0	30	11	2	14	1	21	17	34
17:45	0	0	0	69	0	0	9	1	22	10	1	4	1	40	6	1	7	0	29	8	24
Total Volume	2	1	1	314	4	0	28	5	111	33	10	26	3	136	39	6	40	3	121	49	125
% App Total	50.0%	25.0%	25.0%			0.0%	84.8%	15.2%			25.6%	66.7%	7.7%			12.2%	81.6%	6.1%			
PHF	.500	.250	.250		.500	.000	.778	.625		.825	.625	.500	.750		.542	.500	.714	.750		.721	.710

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7119-002 Franklin Street & 15th Street
Date : 2/23/2016

Unshifted Count = All Vehicles & Uturns

	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	2	10	0	12	2	18	0	0	20	0	0	0	0	0	32	0
7:15	0	0	0	0	0	0	2	10	0	12	7	33	0	0	40	0	0	0	0	0	52	0
7:30	0	0	0	0	0	0	6	12	0	18	3	46	0	0	49	0	0	0	0	0	67	0
7:45	0	0	0	0	0	0	8	18	0	26	11	47	0	0	58	0	0	0	0	0	84	0
Total	0	0	0	0	0	0	18	50	0	68	23	144	0	0	167	0	0	0	0	0	235	0
8:00	0	0	0	0	0	0	10	32	0	42	7	83	0	0	90	0	0	0	0	0	132	0
8:15	0	0	0	0	0	0	20	43	0	63	7	73	0	0	80	0	0	0	0	0	143	0
8:30	0	0	0	0	0	0	10	39	0	49	12	61	0	0	73	0	0	0	0	0	122	0
8:45	0	0	0	0	0	0	8	18	0	26	11	70	0	0	81	0	0	0	0	0	107	0
Total	0	0	0	0	0	0	48	132	0	180	37	287	0	0	324	0	0	0	0	0	504	0
16:00	0	0	0	0	0	0	17	30	0	47	9	84	0	0	93	0	0	0	0	0	140	0
16:15	0	0	0	0	0	0	7	26	0	33	6	82	0	0	88	0	0	0	0	0	121	0
16:30	0	0	0	0	0	0	6	27	0	33	6	74	0	0	80	0	0	0	0	0	113	0
16:45	0	0	0	0	0	0	13	19	0	32	10	73	0	0	83	0	0	0	0	0	115	0
Total	0	0	0	0	0	0	43	102	0	145	31	313	0	0	344	0	0	0	0	0	489	0
17:00	0	0	0	0	0	0	18	16	0	34	6	84	0	0	90	0	0	0	0	0	124	0
17:15	0	0	0	0	0	0	19	18	0	37	5	97	0	0	102	0	0	0	0	0	139	0
17:30	0	0	0	0	0	0	19	23	0	42	9	89	0	0	98	0	0	0	0	0	140	0
17:45	0	0	0	0	0	0	7	23	0	30	7	92	0	0	99	0	0	0	0	0	129	0
Total	0	0	0	0	0	0	63	80	0	143	27	362	0	0	389	0	0	0	0	0	532	0
Grand Total	0	0	0	0	0	0	172	364	0	536	118	1106	0	0	1224	0	0	0	0	0	1760	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	32.1%	67.9%	0.0%		9.6%	90.4%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	20.7%	0.0%	30.5%	6.7%	62.8%	0.0%	0.0%	69.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	0	0	0	0	10	32	0	42	7	83	0	0	90	0	0	0	0	0	132
8:15	0	0	0	0	0	0	20	43	0	63	7	73	0	0	80	0	0	0	0	0	143
8:30	0	0	0	0	0	0	10	39	0	49	12	61	0	0	73	0	0	0	0	0	122
8:45	0	0	0	0	0	0	8	18	0	26	11	70	0	0	81	0	0	0	0	0	107
Total Volume	0	0	0	0	0	0	48	132	0	180	37	287	0	0	324	0	0	0	0	0	504
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	26.7%	73.3%	0.0%		11.4%	88.6%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.600	.767	.000	.714	.771	.864	.000	.000	.900	.000	.000	.000	.000	.000	.881

PM PEAK HOUR	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	18	16	0	34	6	84	0	0	90	0	0	0	0	0	124
17:15	0	0	0	0	0	0	19	18	0	37	5	97	0	0	102	0	0	0	0	0	139
17:30	0	0	0	0	0	0	19	23	0	42	9	89	0	0	98	0	0	0	0	0	140
17:45	0	0	0	0	0	0	7	23	0	30	7	92	0	0	99	0	0	0	0	0	129
Total Volume	0	0	0	0	0	0	63	80	0	143	27	362	0	0	389	0	0	0	0	0	532
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	44.1%	55.9%	0.0%		6.9%	93.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.829	.870	.000	.851	.750	.933	.000	.000	.953	.000	.000	.000	.000	.000	.950

ALL TRAFFIC DATA

City of Oakland
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7119-002 Franklin Street & 15th Street
Date : 2/23/2016

Bank 1 Count = Bikes & Peds

	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	3	0	0	0	0	2	0	0	1	0	3	1	0	0	0	6	0	1	14
7:15	0	1	0	5	1	0	0	0	6	0	1	1	0	7	2	0	1	1	5	2	5	23
7:30	0	0	0	4	0	0	1	1	5	2	0	1	0	9	1	0	0	0	7	0	3	25
7:45	0	2	0	9	2	0	3	0	19	3	0	5	0	9	5	0	0	0	10	0	10	47
Total	0	3	0	21	3	0	4	1	32	5	1	8	0	28	9	0	1	1	28	2	19	109
8:00	0	0	0	23	0	0	3	0	38	3	0	1	2	29	3	0	0	0	30	0	6	120
8:15	0	0	0	26	0	1	0	1	30	2	1	6	0	14	7	0	0	0	16	0	9	86
8:30	0	0	0	17	0	1	2	1	26	4	0	4	0	17	4	0	1	0	15	1	9	75
8:45	0	0	0	12	0	2	5	1	15	8	1	4	0	24	5	0	0	0	14	0	13	65
Total	0	0	0	78	0	4	10	3	109	17	2	15	2	84	19	0	1	0	75	1	37	346
16:00	0	0	0	35	0	0	3	1	44	4	0	9	0	41	9	0	0	0	38	0	13	158
16:15	0	2	0	13	2	0	0	1	34	1	0	5	0	20	5	0	0	0	29	0	8	96
16:30	0	0	0	10	0	1	0	1	27	2	2	8	1	16	11	0	1	1	13	2	15	66
16:45	0	0	0	26	0	0	1	0	20	1	1	14	0	19	15	0	0	0	27	0	16	92
Total	0	2	0	84	2	1	4	3	125	8	3	36	1	96	40	0	1	1	107	2	52	412
17:00	0	1	0	12	1	0	3	2	36	5	0	24	1	21	25	0	0	0	32	0	31	101
17:15	0	2	0	27	2	0	1	2	21	3	0	13	0	18	13	1	0	0	27	1	19	93
17:30	0	0	1	15	1	0	4	2	20	6	0	7	0	16	7	0	0	0	18	0	14	69
17:45	2	1	0	17	3	1	0	5	18	6	0	7	1	15	8	0	0	0	17	0	17	67
Total	2	4	1	71	7	1	8	11	95	20	0	51	2	70	53	1	0	0	94	1	81	330
Grand Total	2	9	1	254	12	6	26	18	361	50	6	110	5	278	121	1	3	2	304	6	189	1197
Apprch %	16.7%	75.0%	8.3%			12.0%	52.0%	36.0%			5.0%	90.9%	4.1%			16.7%	50.0%	33.3%				
Total %	1.1%	4.8%	0.5%		6.3%	3.2%	13.8%	9.5%		26.5%	3.2%	58.2%	2.6%		64.0%	0.5%	1.6%	1.1%		3.2%	100.0%	

AM PEAK HOUR	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	0	23	0	0	3	0	38	3	0	1	2	29	3	0	0	0	30	0	6
8:15	0	0	0	26	0	1	0	1	30	2	1	6	0	14	7	0	0	0	16	0	9
8:30	0	0	0	17	0	1	2	1	26	4	0	4	0	17	4	0	1	0	15	1	9
8:45	0	0	0	12	0	2	5	1	15	8	1	4	0	24	5	0	0	0	14	0	13
Total Volume	0	0	0	78	0	4	10	3	109	17	2	15	2	84	19	0	1	0	75	1	37
% App Total	0.0%	0.0%	0.0%			23.5%	58.8%	17.6%			10.5%	78.9%	10.5%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.500	.500	.750		.531	.500	.625	.250		.679	.000	.250	.000		.250	.712

PM PEAK HOUR	Franklin Street Southbound					15th Street Westbound					Franklin Street Northbound					15th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	1	0	12	1	0	3	2	36	5	0	24	1	21	25	0	0	0	32	0	31
17:15	0	2	0	27	2	0	1	2	21	3	0	13	0	18	13	1	0	0	27	1	19
17:30	0	0	1	15	1	0	4	2	20	6	0	7	0	16	7	0	0	0	18	0	14
17:45	2	1	0	17	3	1	0	5	18	6	0	7	1	15	8	0	0	0	17	0	17
Total Volume	2	4	1	71	7	1	8	11	95	20	0	51	2	70	53	1	0	0	94	1	81
% App Total	28.6%	57.1%	14.3%			5.0%	40.0%	55.0%			0.0%	96.2%	3.8%			100.0%	0.0%	0.0%			
PHF	.250	.500	.250		.583	.250	.500	.550		.833	.000	.531	.500		.530	.250	.000	.000		.250	.653

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7863-001 Franklin Street-17th Street.ppd
Date : 10/28/2015

Unshifted Count = All Vehicles

	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	0	0	0	0	0	0	32	9	0	41	36	46	0	0	82	123	0
07:15	0	0	0	0	0	0	0	0	0	0	0	28	4	0	32	31	42	0	0	73	105	0
07:30	0	0	0	0	0	0	0	0	0	0	0	35	9	0	44	48	65	0	0	113	157	0
07:45	0	0	0	0	0	0	0	0	0	0	0	47	8	0	55	47	87	0	0	134	189	0
Total	0	0	0	0	0	0	0	0	0	0	0	142	30	0	172	162	240	0	0	402	574	0
08:00	0	0	0	0	0	0	0	0	0	0	0	55	16	0	71	48	103	0	0	151	222	0
08:15	0	0	0	0	0	0	0	0	0	0	0	88	28	0	116	75	86	0	0	161	277	0
08:30	0	0	0	0	0	0	0	0	0	0	0	65	19	0	84	73	88	0	0	161	245	0
08:45	0	0	0	0	0	0	0	0	0	0	0	73	20	0	93	82	81	0	0	163	256	0
Total	0	0	0	0	0	0	0	0	0	0	0	281	83	0	364	278	358	0	0	636	1000	0
16:00	0	0	0	0	0	0	0	0	0	0	0	83	27	0	110	29	94	0	0	123	233	0
16:15	0	0	0	0	0	0	0	0	0	0	0	71	25	0	96	26	110	0	0	136	232	0
16:30	0	0	0	0	0	0	0	0	0	0	0	92	23	0	115	35	84	0	0	119	234	0
16:45	0	0	0	0	0	0	0	0	0	0	0	79	22	0	101	27	116	0	0	143	244	0
Total	0	0	0	0	0	0	0	0	0	0	0	325	97	0	422	117	404	0	0	521	943	0
17:00	0	0	0	0	0	0	0	0	0	0	0	123	27	0	150	31	102	0	0	133	283	0
17:15	0	0	0	0	0	0	0	0	0	0	0	94	28	0	122	22	108	0	0	130	252	0
17:30	0	0	0	0	0	0	0	0	0	0	0	101	21	0	122	29	114	0	0	143	265	0
17:45	0	0	0	0	0	0	0	0	0	0	0	65	24	0	89	20	114	0	0	134	223	0
Total	0	0	0	0	0	0	0	0	0	0	0	383	100	0	483	102	438	0	0	540	1023	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1131	310	0	1441	659	1440	0	0	2099	3540	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	78.5%	21.5%	0.0%		31.4%	68.6%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.9%	8.8%	0.0%	40.7%	18.6%	40.7%	0.0%	0.0%	59.3%	100.0%	

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7863-001 Franklin Street-17th Street.ppd
Date : 10/28/2015

Unshifted Count = All Vehicles

AM PEAK HOUR	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0	0	0	0	0	0	0	0	0	55	16	0	71	48	103	0	0	151	222
08:15	0	0	0	0	0	0	0	0	0	0	0	88	28	0	116	75	86	0	0	161	277
08:30	0	0	0	0	0	0	0	0	0	0	0	65	19	0	84	73	88	0	0	161	245
08:45	0	0	0	0	0	0	0	0	0	0	0	73	20	0	93	82	81	0	0	163	256
Total Volume	0	0	0	0	0	0	0	0	0	0	0	281	83	0	364	278	358	0	0	636	1000
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	77.2%	22.8%	0.0%		43.7%	56.3%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.798	.741	.000	.784	.848	.869	.000	.000	.975	.903

PM PEAK HOUR	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	79	22	0	101	27	116	0	0	143	244
17:00	0	0	0	0	0	0	0	0	0	0	0	123	27	0	150	31	102	0	0	133	283
17:15	0	0	0	0	0	0	0	0	0	0	0	94	28	0	122	22	108	0	0	130	252
17:30	0	0	0	0	0	0	0	0	0	0	0	101	21	0	122	29	114	0	0	143	265
Total Volume	0	0	0	0	0	0	0	0	0	0	0	397	98	0	495	109	440	0	0	549	1044
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	80.2%	19.8%	0.0%		19.9%	80.1%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.807	.875	.000	.825	.879	.948	.000	.000	.960	.922

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7863-001 Franklin Street-17th Street.ppd
Date : 10/28/2015

Bank 1 Count = Peds & Bikes

	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	0	0	24	0	0	0	0	13	0	0	1	0	15	1	0	1	0	11	1	2	63
07:15	0	0	0	23	0	0	0	0	17	0	0	1	0	10	1	0	2	0	3	2	3	53
07:30	0	0	0	34	0	0	0	0	19	0	0	2	0	30	2	0	4	0	12	4	6	95
07:45	0	0	0	47	0	0	0	0	19	0	0	4	0	30	4	0	3	1	9	4	8	105
Total	0	0	0	128	0	0	0	0	68	0	0	8	0	85	8	0	10	1	35	11	19	316
08:00	0	0	0	44	0	0	0	0	19	0	0	6	0	26	6	0	4	0	18	4	10	107
08:15	0	0	0	76	0	0	0	0	36	0	0	1	1	39	2	0	7	0	21	7	9	172
08:30	0	0	0	54	0	0	0	0	39	0	0	3	0	23	3	1	3	1	13	5	8	129
08:45	0	0	0	53	0	0	1	0	40	1	2	3	0	44	5	0	7	0	19	7	13	156
Total	0	0	0	227	0	0	1	0	134	1	2	13	1	132	16	1	21	1	71	23	40	564
16:00	0	0	0	41	0	0	2	0	38	2	1	10	0	31	11	0	3	0	21	3	16	131
16:15	1	0	0	37	1	0	0	0	29	0	0	5	1	27	6	0	2	0	11	2	9	104
16:30	1	1	0	47	2	0	1	0	42	1	0	9	0	45	9	0	7	1	15	8	20	149
16:45	0	0	0	62	0	0	0	2	44	2	0	6	0	53	6	2	7	0	17	9	17	176
Total	2	1	0	187	3	0	3	2	153	5	1	30	1	156	32	2	19	1	64	22	62	560
17:00	0	0	0	75	0	0	0	0	46	0	0	14	2	30	16	3	6	0	32	9	25	183
17:15	0	1	1	52	2	0	0	0	39	0	1	9	0	38	10	1	6	0	16	7	19	145
17:30	1	0	0	33	1	0	0	2	15	2	0	10	2	27	12	2	5	1	17	8	23	92
17:45	1	0	0	51	1	0	0	2	34	2	0	13	0	40	13	1	4	0	16	5	21	141
Total	2	1	1	211	4	0	0	4	134	4	1	46	4	135	51	7	21	1	81	29	88	561
Grand Total	4	2	1	753	7	0	4	6	489	10	4	97	6	508	107	10	71	4	251	85	209	2001
Apprch %	57.1%	28.6%	14.3%			0.0%	40.0%	60.0%			3.7%	90.7%	5.6%			11.8%	83.5%	4.7%				
Total %	1.9%	1.0%	0.5%		3.3%	0.0%	1.9%	2.9%		4.8%	1.9%	46.4%	2.9%		51.2%	4.8%	34.0%	1.9%		40.7%	100.0%	

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7863-001 Franklin Street-17th Street.ppd
Date : 10/28/2015

Bank 1 Count = Peds & Bikes

AM PEAK HOUR	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	0	0	44	0	0	0	0	19	0	0	6	0	26	6	0	4	0	18	4	10
08:15	0	0	0	76	0	0	0	0	36	0	0	1	1	39	2	0	7	0	21	7	9
08:30	0	0	0	54	0	0	0	0	39	0	0	3	0	23	3	1	3	1	13	5	8
08:45	0	0	0	53	0	0	1	0	40	1	2	3	0	44	5	0	7	0	19	7	13
Total Volume	0	0	0	227	0	0	1	0	134	1	2	13	1	132	16	1	21	1	71	23	40
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			12.5%	81.3%	6.3%			4.3%	91.3%	4.3%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.542	.250		.667	.250	.750	.250		.821	.769

PM PEAK HOUR	Franklin Street Southbound					17th Street Westbound					Franklin Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	62	0	0	0	2	44	2	0	6	0	53	6	2	7	0	17	9	17
17:00	0	0	0	75	0	0	0	0	46	0	0	14	2	30	16	3	6	0	32	9	25
17:15	0	1	1	52	2	0	0	0	39	0	1	9	0	38	10	1	6	0	16	7	19
17:30	1	0	0	33	1	0	0	2	15	2	0	10	2	27	12	2	5	1	17	8	23
Total Volume	1	1	1	222	3	0	0	4	144	4	1	39	4	148	44	8	24	1	82	33	84
% App Total	33.3%	33.3%	33.3%			0.0%	0.0%	100.0%			2.3%	88.6%	9.1%			24.2%	72.7%	3.0%			
PHF	.250	.250	.250		.375	.000	.000	.500		.500	.250	.696	.500		.688	.667	.857	.250		.917	.840

Southbound Peds = North Leg (traveling EB or WB)
Westbound Peds = East Leg (traveling NB or SB)
Northbound Peds = South Leg (traveling EB or WB)
Eastbound Peds = West Leg (traveling NB or SB)

ALL TRAFFIC DATA

Alameda County
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7324-027 Broadway-13th Street.ppd
Date : 5/20/2014

Unshifted Count = All Vehicles

	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	9	47	0	0	56	0	0	0	0	0	0	58	14	0	72	0	0	0	0	0	128	0
07:15	11	62	0	0	73	0	0	0	0	0	0	65	8	0	73	0	0	0	0	0	146	0
07:30	16	68	0	0	84	0	0	0	0	0	0	56	8	0	64	0	0	0	0	0	148	0
07:45	21	85	0	0	106	0	0	0	0	0	0	68	17	0	85	0	0	0	0	0	191	0
Total	57	262	0	0	319	0	0	0	0	0	0	247	47	0	294	0	0	0	0	0	613	0
08:00	26	79	0	0	105	0	0	0	0	0	0	88	23	0	111	0	0	0	0	0	216	0
08:15	24	92	0	0	116	0	0	0	0	0	0	73	25	0	98	0	0	0	0	0	214	0
08:30	45	101	0	0	146	0	0	0	0	0	0	98	30	0	128	0	0	0	0	0	274	0
08:45	23	96	0	0	119	0	0	0	0	0	0	63	30	0	93	0	0	0	0	0	212	0
Total	118	368	0	0	486	0	0	0	0	0	0	322	108	0	430	0	0	0	0	0	916	0
11:00	16	127	0	0	143	0	0	0	0	0	0	70	25	0	95	0	0	0	0	0	238	0
11:15	26	135	0	0	161	0	0	0	0	0	0	94	20	0	114	0	0	0	0	0	275	0
11:30	22	123	0	0	145	0	0	0	0	0	0	85	24	0	109	0	0	0	0	0	254	0
11:45	28	134	0	0	162	0	0	0	0	0	0	85	18	0	103	0	0	0	0	0	265	0
Total	92	519	0	0	611	0	0	0	0	0	0	334	87	0	421	0	0	0	0	0	1032	0
12:00	20	120	0	0	140	0	0	0	0	0	0	99	22	0	121	0	0	0	0	0	261	0
12:15	20	147	0	0	167	0	0	0	0	0	0	69	23	0	92	0	0	0	0	0	259	0
12:30	25	123	0	0	148	0	0	0	0	0	0	92	30	0	122	0	0	0	0	0	270	0
12:45	25	124	0	0	149	0	0	0	0	0	0	103	14	0	117	0	0	0	0	0	266	0
Total	90	514	0	0	604	0	0	0	0	0	0	363	89	0	452	0	0	0	0	0	1056	0
16:00	13	148	0	0	161	0	0	0	0	0	0	101	18	0	119	0	0	0	0	0	280	0
16:15	31	147	0	0	178	0	0	0	0	0	0	89	16	0	105	0	0	0	0	0	283	0
16:30	33	150	0	0	183	0	0	0	0	0	0	104	24	0	128	0	0	0	0	0	311	0
16:45	27	148	0	0	175	0	0	0	0	0	0	92	20	0	112	0	0	0	0	0	287	0
Total	104	593	0	0	697	0	0	0	0	0	0	386	78	0	464	0	0	0	0	0	1161	0
17:00	30	153	0	0	183	0	0	0	0	0	0	95	35	0	130	0	0	0	0	0	313	0
17:15	32	156	0	0	188	0	0	0	0	0	0	94	26	0	120	0	0	0	0	0	308	0
17:30	28	163	0	0	191	0	0	0	0	0	0	101	34	0	135	0	0	0	0	0	326	0
17:45	38	125	0	0	163	0	0	0	0	0	0	100	25	0	125	0	0	0	0	0	288	0
Total	128	597	0	0	725	0	0	0	0	0	0	390	120	0	510	0	0	0	0	0	1235	0
Grand Total	589	2853	0	0	3442	0	0	0	0	0	0	2042	529	0	2571	0	0	0	0	0	6013	0
Apprch %	17.1%	82.9%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	79.4%	20.6%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	9.8%	47.4%	0.0%	0.0%	57.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.0%	8.8%	0.0%	42.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

ALL TRAFFIC DATA

Alameda County
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7324-027 Broadway-13th Street.ppd
Date : 5/20/2014

Unshifted Count = All Vehicles

AM PEAK HOUR	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	26	79	0	0	105	0	0	0	0	0	0	88	23	0	111	0	0	0	0	0	216
08:15	24	92	0	0	116	0	0	0	0	0	0	73	25	0	98	0	0	0	0	0	214
08:30	45	101	0	0	146	0	0	0	0	0	0	98	30	0	128	0	0	0	0	0	274
08:45	23	96	0	0	119	0	0	0	0	0	0	63	30	0	93	0	0	0	0	0	212
Total Volume	118	368	0	0	486	0	0	0	0	0	0	322	108	0	430	0	0	0	0	0	916
% App Total	24.3%	75.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	74.9%	25.1%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.656	.911	.000	.000	.832	.000	.000	.000	.000	.000	.000	.821	.900	.000	.840	.000	.000	.000	.000	.000	.836

NOON PEAK	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	20	120	0	0	140	0	0	0	0	0	0	99	22	0	121	0	0	0	0	0	261
12:15	20	147	0	0	167	0	0	0	0	0	0	69	23	0	92	0	0	0	0	0	259
12:30	25	123	0	0	148	0	0	0	0	0	0	92	30	0	122	0	0	0	0	0	270
12:45	25	124	0	0	149	0	0	0	0	0	0	103	14	0	117	0	0	0	0	0	266
Total Volume	90	514	0	0	604	0	0	0	0	0	0	363	89	0	452	0	0	0	0	0	1056
% App Total	14.9%	85.1%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	80.3%	19.7%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.900	.874	.000	.000	.904	.000	.000	.000	.000	.000	.000	.881	.742	.000	.926	.000	.000	.000	.000	.000	.978

PM PEAK HOUR	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	30	153	0	0	183	0	0	0	0	0	0	95	35	0	130	0	0	0	0	0	313
17:15	32	156	0	0	188	0	0	0	0	0	0	94	26	0	120	0	0	0	0	0	308
17:30	28	163	0	0	191	0	0	0	0	0	0	101	34	0	135	0	0	0	0	0	326
17:45	38	125	0	0	163	0	0	0	0	0	0	100	25	0	125	0	0	0	0	0	288
Total Volume	128	597	0	0	725	0	0	0	0	0	0	390	120	0	510	0	0	0	0	0	1235
% App Total	17.7%	82.3%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	76.5%	23.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.842	.916	.000	.000	.949	.000	.000	.000	.000	.000	.000	.965	.857	.000	.944	.000	.000	.000	.000	.000	.947

ALL TRAFFIC DATA

Alameda County
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7324-027 Broadway-13th Street.ppd
Date : 5/20/2014

Bank 1 Count = Peds & Bikes

	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	2	0	0	2	0	0	0	44	0	0	1	0	26	1	0	0	0	0	0	3	70
07:15	3	4	0	0	7	0	0	0	48	0	0	3	0	31	3	0	0	0	0	0	10	79
07:30	1	8	0	0	9	1	0	0	52	1	0	1	0	37	1	0	0	0	0	0	11	89
07:45	2	3	0	0	5	0	0	1	101	1	0	3	1	61	4	0	0	0	0	0	10	162
Total	6	17	0	0	23	1	0	1	245	2	0	8	1	155	9	0	0	0	0	0	34	400
08:00	3	11	0	0	14	0	0	0	75	0	0	2	0	64	2	0	0	0	0	0	16	139
08:15	2	12	0	0	14	0	0	0	66	0	0	3	1	59	4	0	0	0	0	0	18	125
08:30	9	11	0	0	20	0	0	0	88	0	0	2	0	68	2	0	0	0	0	0	22	156
08:45	5	11	0	0	16	0	0	0	67	0	0	3	0	60	3	0	0	0	0	0	19	127
Total	19	45	0	0	64	0	0	0	296	0	0	10	1	251	11	0	0	0	0	0	75	547
11:00	1	4	0	1	5	0	0	1	44	1	0	7	0	26	7	0	0	0	0	0	13	71
11:15	2	3	0	0	5	0	0	0	48	0	0	5	0	31	5	0	0	0	0	0	10	79
11:30	0	2	0	0	2	0	0	0	52	0	0	5	1	37	6	0	0	0	0	0	8	89
11:45	3	9	0	0	12	0	0	1	101	1	0	3	1	61	4	0	0	0	0	0	17	162
Total	6	18	0	1	24	0	0	2	245	2	0	20	2	155	22	0	0	0	0	0	48	401
12:00	1	5	0	0	6	0	0	2	75	2	0	2	1	64	3	0	0	0	0	0	11	139
12:15	1	3	0	0	4	0	0	0	66	0	0	5	1	59	6	0	0	0	0	0	10	125
12:30	1	5	0	0	6	0	0	2	88	2	0	4	2	68	6	0	0	0	0	0	14	156
12:45	4	3	0	0	7	0	0	0	67	0	0	2	3	60	5	0	0	0	0	0	12	127
Total	7	16	0	0	23	0	0	4	296	4	0	13	7	251	20	0	0	0	0	0	47	547
16:00	0	6	0	0	6	0	0	0	111	0	0	6	1	66	7	0	0	0	0	0	13	177
16:15	2	9	0	0	11	0	0	0	91	0	0	9	1	78	10	0	0	0	0	0	21	169
16:30	4	3	0	0	7	1	0	0	95	1	0	3	2	64	5	0	0	0	0	0	13	159
16:45	1	9	0	0	10	0	0	0	110	0	0	9	1	76	10	0	0	0	0	0	20	186
Total	7	27	0	0	34	1	0	0	407	1	0	27	5	284	32	0	0	0	0	0	67	691
17:00	1	4	0	0	5	0	0	1	115	1	0	10	6	99	16	0	0	0	0	0	22	214
17:15	1	13	0	0	14	1	0	0	105	1	0	4	4	78	8	0	0	0	0	0	23	183
17:30	1	4	0	0	5	1	0	1	95	2	0	9	3	62	12	0	0	0	0	0	19	157
17:45	2	5	0	0	7	1	0	0	92	1	0	5	2	57	7	0	0	0	0	0	15	149
Total	5	26	0	0	31	3	0	2	407	5	0	28	15	296	43	0	0	0	0	0	79	703
Grand Total	50	149	0	1	199	5	0	9	1896	14	0	106	31	1392	137	0	0	0	0	0	350	3289
Apprch %	25.1%	74.9%	0.0%			35.7%	0.0%	64.3%			0.0%	77.4%	22.6%			0.0%	0.0%	0.0%				
Total %	14.3%	42.6%	0.0%		56.9%	1.4%	0.0%	2.6%		4.0%	0.0%	30.3%	8.9%		39.1%	0.0%	0.0%	0.0%		0.0%	100.0%	

ALL TRAFFIC DATA

Alameda County
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 14-7324-027 Broadway-13th Street.ppd
Date : 5/20/2014

Bank 1 Count = Peds & Bikes

AM PEAK HOUR	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	3	11	0	0	14	0	0	0	75	0	0	2	0	64	2	0	0	0	0	0	16
08:15	2	12	0	0	14	0	0	0	66	0	0	3	1	59	4	0	0	0	0	0	18
08:30	9	11	0	0	20	0	0	0	88	0	0	2	0	68	2	0	0	0	0	0	22
08:45	5	11	0	0	16	0	0	0	67	0	0	3	0	60	3	0	0	0	0	0	19
Total Volume	19	45	0	0	64	0	0	0	296	0	0	10	1	251	11	0	0	0	0	0	75
% App Total	29.7%	70.3%	0.0%			0.0%	0.0%	0.0%			0.0%	90.9%	9.1%			0.0%	0.0%	0.0%			
PHF	.528	.938	.000		.800	.000	.000	.000		.000	.000	.833	.250		.688	.000	.000	.000		.000	.852

NOON PEAK	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	1	5	0	0	6	0	0	2	75	2	0	2	1	64	3	0	0	0	0	0	11
12:15	1	3	0	0	4	0	0	0	66	0	0	5	1	59	6	0	0	0	0	0	10
12:30	1	5	0	0	6	0	0	2	88	2	0	4	2	68	6	0	0	0	0	0	14
12:45	4	3	0	0	7	0	0	0	67	0	0	2	3	60	5	0	0	0	0	0	12
Total Volume	7	16	0	0	23	0	0	4	296	4	0	13	7	251	20	0	0	0	0	0	47
% App Total	30.4%	69.6%	0.0%			0.0%	0.0%	100.0%			0.0%	65.0%	35.0%			0.0%	0.0%	0.0%			
PHF	.438	.800	.000		.821	.000	.000	.500		.500	.000	.650	.583		.833	.000	.000	.000		.000	.839

PM PEAK HOUR	Broadway Southbound					13th Street Westbound					Broadway Northbound					13th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	4	0	0	5	0	0	1	115	1	0	10	6	99	16	0	0	0	0	0	22
17:15	1	13	0	0	14	1	0	0	105	1	0	4	4	78	8	0	0	0	0	0	23
17:30	1	4	0	0	5	1	0	1	95	2	0	9	3	62	12	0	0	0	0	0	19
17:45	2	5	0	0	7	1	0	0	92	1	0	5	2	57	7	0	0	0	0	0	15
Total Volume	5	26	0	0	31	3	0	2	407	5	0	28	15	296	43	0	0	0	0	0	79
% App Total	16.1%	83.9%	0.0%			60.0%	0.0%	40.0%			0.0%	65.1%	34.9%			0.0%	0.0%	0.0%			
PHF	.625	.500	.000		.554	.750	.000	.500		.625	.000	.700	.625		.672	.000	.000	.000		.000	.859

National Data and Surveying Services

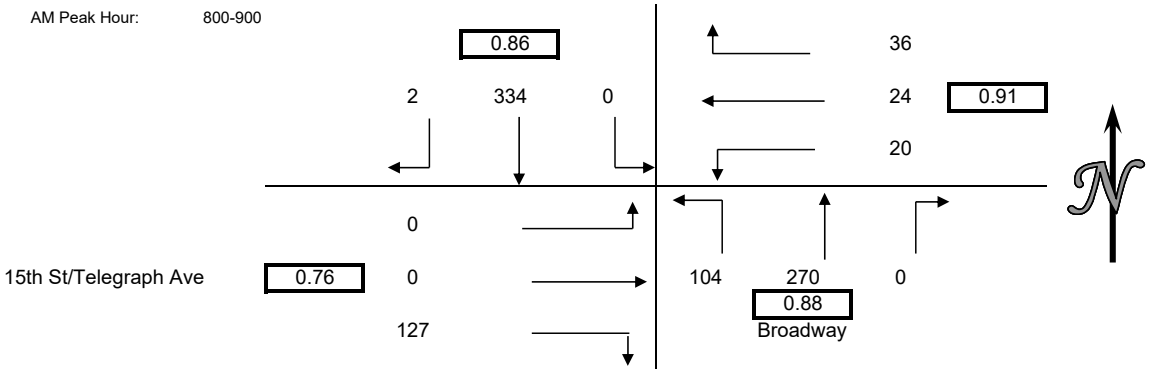
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		KIMLEY-HORN
PROJECT:		16-7871
DATE:		11/29/2016
PERIOD:		700 TO 900
		Weekday
INTERSECTION:	N/S	Broadway
	E/W	15th St/Telegraph Ave
CITY:		City of Oakland

VEHICLE COUNTS

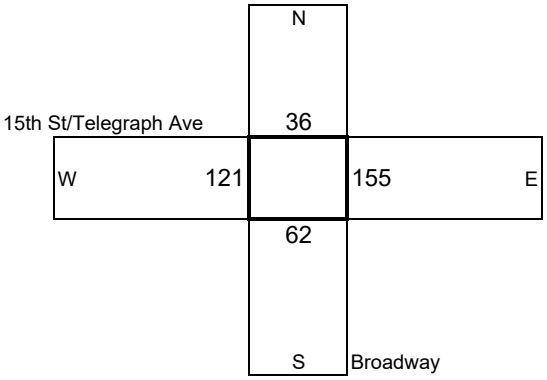
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	0	34	0	2	0	1	0	38	18	9	0	0	102
715-730	0	50	0	3	5	0	0	51	25	16	0	0	150
730-745	0	59	0	6	4	0	0	44	29	21	0	0	163
745-800	0	74	0	12	2	2	0	73	27	38	0	0	228
800-815	0	80	0	11	4	2	0	74	32	42	0	0	245
815-830	2	79	0	8	8	4	0	50	28	27	0	0	206
830-845	0	77	0	7	7	8	0	77	24	23	0	0	223
845-900	0	98	0	10	5	6	0	69	20	35	0	0	243
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	0	217	0	23	11	3	0	206	99	84	0	0	643
715-815	0	263	0	32	15	4	0	242	113	117	0	0	786
730-830	2	292	0	37	18	8	0	241	116	128	0	0	842
745-845	2	310	0	38	21	16	0	274	111	130	0	0	902
800-900	2	334	0	36	24	20	0	270	104	127	0	0	917

AM Peak Hour: 800-900



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	4	12	6	12	34
715-730	1	11	4	16	32
730-745	1	19	13	17	50
745-800	5	27	5	33	70
800-815	10	26	8	24	68
815-830	9	39	16	25	89
830-845	11	41	20	36	108
845-900	6	49	18	36	109
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	11	69	28	78	186
715-815	17	83	30	90	220
730-830	25	111	42	99	277
745-845	35	133	49	118	335
800-900	36	155	62	121	374

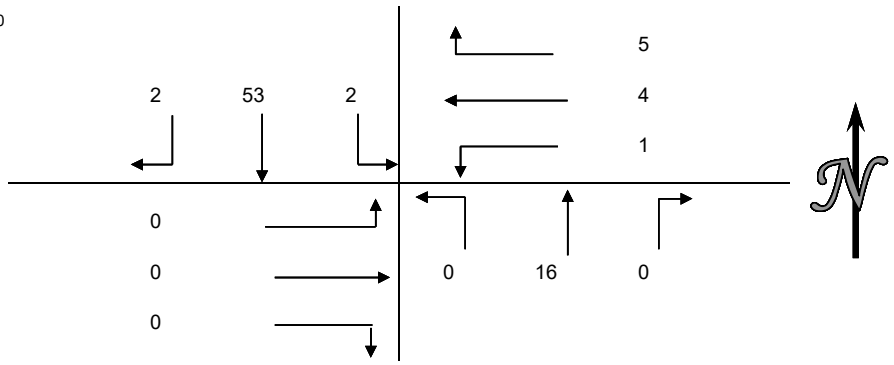


BICYCLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	0	5	0	0	0	0	0	3	0	0	0	0	8
715-730	0	8	0	0	0	0	0	1	0	0	0	0	9
730-745	0	7	0	0	0	0	1	2	0	0	0	0	10
745-800	0	14	0	1	1	0	0	2	0	0	0	0	18

800-815	0	12	0	1	1	0	0	1	0	0	0	0	15
815-830	2	10	1	1	2	0	0	5	0	0	0	0	21
830-845	0	14	1	1	1	0	0	6	0	0	0	0	23
845-900	0	17	0	2	0	1	0	4	0	0	0	0	24
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	0	34	0	1	1	0	1	8	0	0	0	0	45
715-815	0	41	0	2	2	0	1	6	0	0	0	0	52
730-830	2	43	1	3	4	0	1	10	0	0	0	0	64
745-845	2	50	2	4	5	0	0	14	0	0	0	0	77
800-900	2	53	2	5	4	1	0	16	0	0	0	0	83

AM Peak Hour: 800-900



National Data and Surveying Services

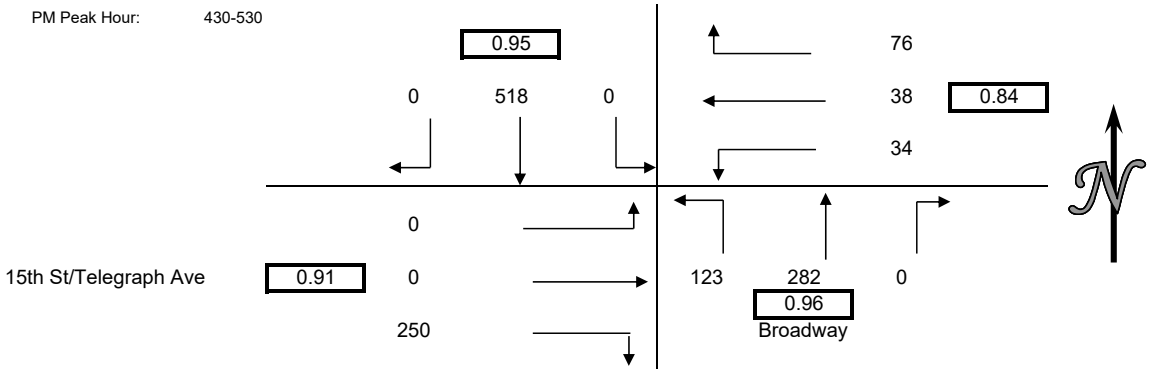
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		KIMLEY-HORN
PROJECT:		16-7871
DATE:		11/29/2016
PERIOD:		400 TO 600
		Weekday
INTERSECTION:	N/S	Broadway
	E/W	15th St/Telegraph Ave
CITY:		City of Oakland

VEHICLE COUNTS

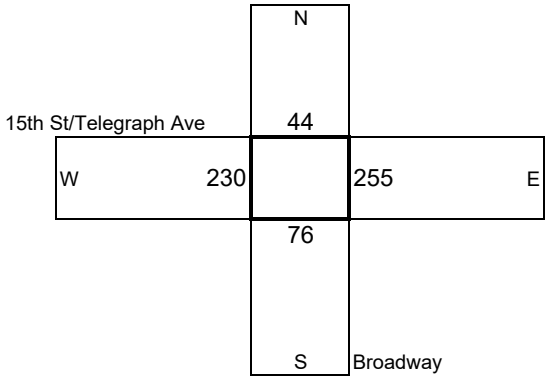
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	2	116	0	17	12	5	0	74	25	56	0	0	307
415-430	0	103	0	19	10	4	0	78	29	54	0	0	297
430-445	0	117	0	20	11	2	0	72	26	69	0	0	317
445-500	0	130	0	16	6	10	0	73	27	58	0	0	320
500-515	0	136	0	19	11	9	0	67	38	67	0	0	347
515-530	0	135	0	21	10	13	0	70	32	56	0	0	337
530-545	0	106	0	23	11	6	0	71	23	51	0	0	291
545-600	0	101	0	12	9	7	0	81	26	51	0	0	287
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	2	466	0	72	39	21	0	297	107	237	0	0	1241
415-515	0	486	0	74	38	25	0	290	120	248	0	0	1281
430-530	0	518	0	76	38	34	0	282	123	250	0	0	1321
445-545	0	507	0	79	38	38	0	281	120	232	0	0	1295
500-600	0	478	0	75	41	35	0	289	119	225	0	0	1262

PM Peak Hour: 430-530



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	4	38	17	55	114
415-430	8	53	20	39	120
430-445	14	67	27	63	171
445-500	8	50	12	46	116
500-515	13	78	21	67	179
515-530	9	60	16	54	139
530-545	14	52	22	53	141
545-600	18	57	13	46	134
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	34	208	76	203	521
415-515	43	248	80	215	586
430-530	44	255	76	230	605
445-545	44	240	71	220	575
500-600	54	247	72	220	593

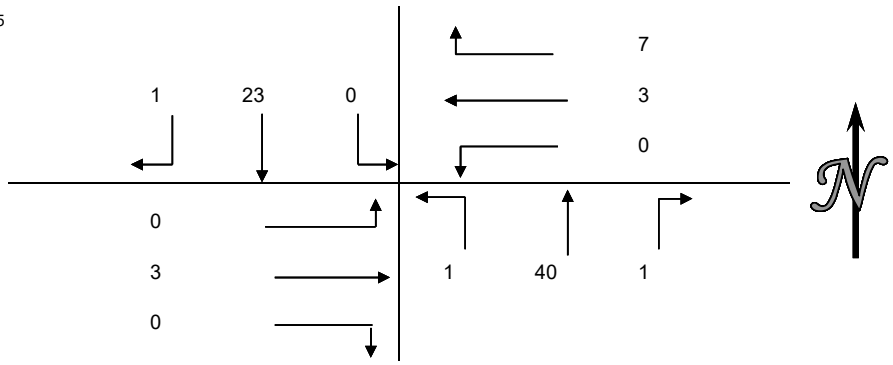


BICYCLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	0	1	0	2	1	0	0	3	0	0	0	0	7
415-430	1	4	0	1	0	0	1	3	0	0	0	1	11
430-445	1	9	0	2	1	0	0	10	0	0	0	0	23
445-500	0	6	0	1	1	0	1	7	0	0	3	0	19

500-515	0	5	0	0	1	0	0	13	0	0	0	0	19
515-530	0	3	0	4	0	0	0	10	1	0	0	0	18
530-545	1	6	1	1	2	1	0	9	0	0	2	1	24
545-600	0	3	2	1	0	0	0	10	0	0	0	0	16
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	2	20	0	6	3	0	2	23	0	0	3	1	60
415-515	2	24	0	4	3	0	2	33	0	0	3	1	72
430-530	1	23	0	7	3	0	1	40	1	0	3	0	79
445-545	1	20	1	6	4	1	1	39	1	0	5	1	80
500-600	1	17	3	6	3	1	0	42	1	0	2	1	77

PM Peak Hour: 445-545



Appendix B:

Predicted Crash Frequency Calculation Sheets

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	Broadway/14th St
Date Performed	12/04/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	11,945
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	9,855
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	0
Type of left-turn signal phasing for Leg #1		Permissive	Not Applicable
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			15,210
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	4
Number of bus stops within 300 m (1,000 ft) of the intersection		0	7
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	6

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.00	0.99	1.00	1.00	0.91	1.00	0.90

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	3.223	1.000	3.223	0.90	1.00	2.906
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	0.962	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.310	0.998	0.90	1.00	0.900
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	2.144	$(5)_{TOTAL}-(5)_{FI}$ = 0.690	2.225	0.90	1.00	2.006

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.900	1.000	2.006	2.906
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.405	0.483	0.969	1.374
Head-on collision	0.049	0.044	0.030	0.060	0.104
Angle collision	0.347	0.312	0.244	0.489	0.802
Sideswipe	0.099	0.089	0.032	0.064	0.153
Other multiple-vehicle collision	0.055	0.049	0.211	0.423	0.473

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.261	1.000	0.261	0.90	1.00	0.235
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.078	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.304	0.079	0.90	1.00	0.072
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.179	$(5)_{TOTAL}-(5)_{FI}$ = 0.696	0.182	0.90	1.00	0.164

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	(9)$_{FI}$ from Worksheet 2E	from Table 12-13	(9)$_{PDO}$ from Worksheet 2E	(9)$_{PDO}$ from Worksheet 2E
Total	1.000	0.072	1.000	0.164	0.235
		(2)*(3)$_{FI}$		(4)*(5)$_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.053	0.870	0.142	0.196
Collision with other object	0.072	0.005	0.070	0.011	0.017
Other single-vehicle collision	0.040	0.003	0.023	0.004	0.007
Single-vehicle noncollision	0.141	0.010	0.034	0.006	0.016

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.12	4.65

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.336	4.65	1.00	1.562
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.562

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	2.906	0.235	3.141	0.015	1.00	0.047
Fatal and injury (FI)	--	--	--	--	1.00	0.047

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.405	0.969	1.374
Head-on collisions (from Worksheet 2D)	0.044	0.060	0.104
Angle collisions (from Worksheet 2D)	0.312	0.489	0.802
Sideswipe (from Worksheet 2D)	0.089	0.064	0.153
Other multiple-vehicle collision (from Worksheet 2D)	0.049	0.423	0.473
Subtotal	0.900	2.006	2.906
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.053	0.142	0.196
Collision with other object (from Worksheet 2F)	0.005	0.011	0.017
Other single-vehicle collision (from Worksheet 2F)	0.003	0.004	0.007
Single-vehicle noncollision (from Worksheet 2F)	0.010	0.006	0.016
Collision with pedestrian (from Worksheet 2G or 2I)	1.562	0.000	1.562
Collision with bicycle (from Worksheet 2J)	0.047	0.000	0.047
Subtotal	1.680	0.164	1.844
Total	2.580	2.170	4.750

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	4.7
Fatal and injury (FI)	2.6
Property damage only (PDO)	2.2

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	14th St/Franklin
Date Performed	12/04/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	9,790
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	3,370
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	0
Type of left-turn signal phasing for Leg #1		Permissive	Not Applicable
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			6,820
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	4
Number of bus stops within 300 m (1,000 ft) of the intersection		0	9
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	9

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.00	0.99	1.00	1.00	0.91	1.00	0.90

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	2.035	1.000	2.035	0.90	1.00	1.835
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	0.601	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.307	0.626	0.90	1.00	0.564
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	1.353	$(5)_{TOTAL}-(5)_{FI}$ = 0.693	1.409	0.90	1.00	1.271

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.564	1.000	1.271	1.835
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.254	0.483	0.614	0.868
Head-on collision	0.049	0.028	0.030	0.038	0.066
Angle collision	0.347	0.196	0.244	0.310	0.506
Sideswipe	0.099	0.056	0.032	0.041	0.097
Other multiple-vehicle collision	0.055	0.031	0.211	0.268	0.299

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.171	1.000	0.171	0.90	1.00	0.154
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.053	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.310	0.053	0.90	1.00	0.048
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.117	$(5)_{TOTAL}-(5)_{FI}$ = 0.690	0.118	0.90	1.00	0.106

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.048	1.000	0.106	0.154
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.035	0.870	0.092	0.128
Collision with other object	0.072	0.003	0.070	0.007	0.011
Other single-vehicle collision	0.040	0.002	0.023	0.002	0.004
Single-vehicle noncollision	0.141	0.007	0.034	0.004	0.010

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.35	1.56	8.74

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.152	8.74	1.00	1.332
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.332

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.835	0.154	1.989	0.015	1.00	0.030
Fatal and injury (FI)	--	--	--	--	1.00	0.030

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.254	0.614	0.868
Head-on collisions (from Worksheet 2D)	0.028	0.038	0.066
Angle collisions (from Worksheet 2D)	0.196	0.310	0.506
Sideswipe (from Worksheet 2D)	0.056	0.041	0.097
Other multiple-vehicle collision (from Worksheet 2D)	0.031	0.268	0.299
Subtotal	0.564	1.271	1.835
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.035	0.092	0.128
Collision with other object (from Worksheet 2F)	0.003	0.007	0.011
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.004
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.004	0.010
Collision with pedestrian (from Worksheet 2G or 2I)	1.332	0.000	1.332
Collision with bicycle (from Worksheet 2J)	0.030	0.000	0.030
Subtotal	1.410	0.106	1.516
Total	1.974	1.377	3.351

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	3.4
Fatal and injury (FI)	2.0
Property damage only (PDO)	1.4

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	Franklin St/15th
Date Performed	12/04/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	4,155
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	1,165
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	0
Type of left-turn signal phasing for Leg #1		Permissive	Not Applicable
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			3,300
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	3
Number of bus stops within 300 m (1,000 ft) of the intersection		0	3
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	9

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.00	0.99	1.00	1.00	0.91	1.00	0.90

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	0.637	1.000	0.637	0.90	1.00	0.574
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	0.173	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.283	0.181	0.90	1.00	0.163
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	0.437	$(5)_{TOTAL}-(5)_{FI}$ = 0.717	0.457	0.90	1.00	0.412

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.163	1.000	0.412	0.574
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.073	0.483	0.199	0.272
Head-on collision	0.049	0.008	0.030	0.012	0.020
Angle collision	0.347	0.056	0.244	0.100	0.157
Sideswipe	0.099	0.016	0.032	0.013	0.029
Other multiple-vehicle collision	0.055	0.009	0.211	0.087	0.096

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.072	1.000	0.072	0.90	1.00	0.064
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.027	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.367	0.026	0.90	1.00	0.024
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.046	$(5)_{TOTAL}-(5)_{FI}$ = 0.633	0.045	0.90	1.00	0.041

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.024	1.000	0.041	0.064
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.018	0.870	0.035	0.053
Collision with other object	0.072	0.002	0.070	0.003	0.005
Other single-vehicle collision	0.040	0.001	0.023	0.001	0.002
Single-vehicle noncollision	0.141	0.003	0.034	0.001	0.005

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.35	1.56	8.74

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.070	8.74	1.00	0.609
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.609

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	0.574	0.064	0.639	0.015	1.00	0.010
Fatal and injury (FI)	--	--	--	--	1.00	0.010

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.073	0.199	0.272
Head-on collisions (from Worksheet 2D)	0.008	0.012	0.020
Angle collisions (from Worksheet 2D)	0.056	0.100	0.157
Sideswipe (from Worksheet 2D)	0.016	0.013	0.029
Other multiple-vehicle collision (from Worksheet 2D)	0.009	0.087	0.096
Subtotal	0.163	0.412	0.574
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.018	0.035	0.053
Collision with other object (from Worksheet 2F)	0.002	0.003	0.005
Other single-vehicle collision (from Worksheet 2F)	0.001	0.001	0.002
Single-vehicle noncollision (from Worksheet 2F)	0.003	0.001	0.005
Collision with pedestrian (from Worksheet 2G or 2I)	0.609	0.000	0.609
Collision with bicycle (from Worksheet 2J)	0.010	0.000	0.010
Subtotal	0.643	0.041	0.683
Total	0.805	0.452	1.258

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	1.3
Fatal and injury (FI)	0.8
Property damage only (PDO)	0.5

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	17th St and Franklin
Date Performed	12/07/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	5,435
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	5,005
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	0
Type of left-turn signal phasing for Leg #1		Permissive	Not Applicable
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			5,960
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	3
Number of bus stops within 300 m (1,000 ft) of the intersection		0	4
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	9

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.00	0.99	1.00	1.00	0.91	1.00	0.90

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	1.187	1.000	1.187	0.90	1.00	1.071
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	0.327	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.286	0.340	0.90	1.00	0.306
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	0.816	$(5)_{TOTAL}-(5)_{FI}$ = 0.714	0.848	0.90	1.00	0.764

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.306	1.000	0.764	1.071
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.138	0.483	0.369	0.507
Head-on collision	0.049	0.015	0.030	0.023	0.038
Angle collision	0.347	0.106	0.244	0.186	0.293
Sideswipe	0.099	0.030	0.032	0.024	0.055
Other multiple-vehicle collision	0.055	0.017	0.211	0.161	0.178

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.127	1.000	0.127	0.90	1.00	0.115
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.046	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.359	0.046	0.90	1.00	0.041
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.082	$(5)_{TOTAL}-(5)_{FI}$ = 0.641	0.082	0.90	1.00	0.074

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.041	1.000	0.074	0.115
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.031	0.870	0.064	0.095
Collision with other object	0.072	0.003	0.070	0.005	0.008
Other single-vehicle collision	0.040	0.002	0.023	0.002	0.003
Single-vehicle noncollision	0.141	0.006	0.034	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.35	1.56	8.74

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.162	8.74	1.00	1.419
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.419

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.071	0.115	1.185	0.015	1.00	0.018
Fatal and injury (FI)	--	--	--	--	1.00	0.018

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.138	0.369	0.507
Head-on collisions (from Worksheet 2D)	0.015	0.023	0.038
Angle collisions (from Worksheet 2D)	0.106	0.186	0.293
Sideswipe (from Worksheet 2D)	0.030	0.024	0.055
Other multiple-vehicle collision (from Worksheet 2D)	0.017	0.161	0.178
Subtotal	0.306	0.764	1.071
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.031	0.064	0.095
Collision with other object (from Worksheet 2F)	0.003	0.005	0.008
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.006	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	1.419	0.000	1.419
Collision with bicycle (from Worksheet 2J)	0.018	0.000	0.018
Subtotal	1.477	0.074	1.551
Total	1.784	0.838	2.622

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.6
Fatal and injury (FI)	1.8
Property damage only (PDO)	0.8

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	Broadway/13th St
Date Performed		Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	3SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 58,100 (veh/day)	--	11,110
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 16,400 (veh/day)	--	2,480
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	0
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	0
Type of left-turn signal phasing for Leg #1		Permissive	Not Applicable
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	0
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			7,030
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	4
Number of bus stops within 300 m (1,000 ft) of the intersection		0	5
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	9

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.00	1.00	1.00	1.00	0.91	1.00	0.91

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-12.13	1.11	0.26	0.33	1.274	1.000	1.274	0.91	1.00	1.161
Fatal and Injury (FI)	-11.58	1.02	0.17	0.30	0.473	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.384	0.489	0.91	1.00	0.445
Property Damage Only (PDO)	-13.24	1.14	0.30	0.36	0.759	$(5)_{TOTAL}-(5)_{FI}$ = 0.616	0.785	0.91	1.00	0.715

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.445	1.000	0.715	1.161
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.549	0.244	0.546	0.391	0.635
Head-on collision	0.038	0.017	0.020	0.014	0.031
Angle collision	0.280	0.125	0.204	0.146	0.271
Sideswipe	0.076	0.034	0.032	0.023	0.057
Other multiple-vehicle collision	0.057	0.025	0.198	0.142	0.167

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-9.02	0.42	0.40	0.36	0.138	1.000	0.138	0.91	1.00	0.126
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.039	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.281	0.039	0.91	1.00	0.035
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.099	$(5)_{TOTAL}-(5)_{FI}$ = 0.719	0.099	0.91	1.00	0.090

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.035	1.000	0.090	0.126
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.001	0.000	0.003	0.000	0.000
Collision with fixed object	0.653	0.023	0.895	0.081	0.104
Collision with other object	0.091	0.003	0.069	0.006	0.009
Other single-vehicle collision	0.045	0.002	0.018	0.002	0.003
Single-vehicle noncollision	0.209	0.007	0.014	0.001	0.009

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.00	1.56	6.47

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.083	6.47	1.00	0.536
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	0.536

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.161	0.126	1.286	0.011	1.00	0.014
Fatal and injury (FI)	--	--	--	--	1.00	0.014

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.244	0.391	0.635
Head-on collisions (from Worksheet 2D)	0.017	0.014	0.031
Angle collisions (from Worksheet 2D)	0.125	0.146	0.271
Sideswipe (from Worksheet 2D)	0.034	0.023	0.057
Other multiple-vehicle collision (from Worksheet 2D)	0.025	0.142	0.167
Subtotal	0.445	0.715	1.161
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.023	0.081	0.104
Collision with other object (from Worksheet 2F)	0.003	0.006	0.009
Other single-vehicle collision (from Worksheet 2F)	0.002	0.002	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.007	0.001	0.009
Collision with pedestrian (from Worksheet 2G or 2I)	0.536	0.000	0.536
Collision with bicycle (from Worksheet 2J)	0.014	0.000	0.014
Subtotal	0.585	0.090	0.675
Total	1.030	0.806	1.836

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	1.8
Fatal and injury (FI)	1.0
Property damage only (PDO)	0.8

Worksheet 2A -- General Information and Input Data for Urban and Suburban Arterial Intersections

General Information		Location Information	
Analyst	Susie Hufstader	Roadway	
Agency or Company	Fehr & Peers	Intersection	Broadway/15th St
Date Performed	12/07/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Intersection type (3ST, 3SG, 4ST, 4SG)		--	4SG
AADT $_{major}$ (veh/day)	$AADT_{MAX}$ = 67,700 (veh/day)	--	10,415
AADT $_{minor}$ (veh/day)	$AADT_{MAX}$ = 33,400 (veh/day)	--	2,795
Intersection lighting (present/not present)		Not Present	Present
Calibration factor, C_i		1.00	1.00
Data for unsignalized intersections only:		--	--
Number of major-road approaches with left-turn lanes (0,1,2)		0	0
Number of major-road approaches with right-turn lanes (0,1,2)		0	0
Data for signalized intersections only:		--	--
Number of approaches with left-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	1
Number of approaches with right-turn lanes (0,1,2,3,4) [for 3SG, use maximum value of 3]		0	2
Number of approaches with left-turn signal phasing [for 3SG, use maximum value of 3]		--	1
Type of left-turn signal phasing for Leg #1		Permissive	Protected
Type of left-turn signal phasing for Leg #2		--	Not Applicable
Type of left-turn signal phasing for Leg #3		--	Not Applicable
Type of left-turn signal phasing for Leg #4 (if applicable)		--	Not Applicable
Number of approaches with right-turn-on-red prohibited [for 3SG, use maximum value of 3]		0	2
Intersection red light cameras (present/not present)		Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol) -- Signalized intersections only			6,050
Maximum number of lanes crossed by a pedestrian (n_{lanesx})		--	5
Number of bus stops within 300 m (1,000 ft) of the intersection		0	5
Schools within 300 m (1,000 ft) of the intersection (present/not present)		Not Present	Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection		0	10

Worksheet 2B -- Crash Modification Factors for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF $_{COMB}$*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.90	0.93	0.92	0.96	0.91	1.00	0.68

Worksheet 2C -- Multiple-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bimv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bimv}**
	from Table 12-10			from Table 12-10	from Equation 12-21		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.99	1.07	0.23	0.39	2.083	1.000	2.083	0.68	1.00	1.406
Fatal and Injury (FI)	-13.14	1.18	0.22	0.33	0.620	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.310	0.646	0.68	1.00	0.436
Property Damage Only (PDO)	-11.02	1.02	0.24	0.44	1.378	$(5)_{TOTAL}-(5)_{FI}$ = 0.690	1.436	0.68	1.00	0.970

Worksheet 2D -- Multiple-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bimv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bimv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bimv\ (TOTAL)}$ (crashes/year)**
	from Table 12-11	$(9)_{FI}$ from Worksheet 2C	from Table 12-11	$(9)_{PDO}$ from Worksheet 2C	$(9)_{PDO}$ from Worksheet 2C
Total	1.000	0.436	1.000	0.970	1.406
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.450	0.196	0.483	0.468	0.665
Head-on collision	0.049	0.021	0.030	0.029	0.050
Angle collision	0.347	0.151	0.244	0.237	0.388
Sideswipe	0.099	0.043	0.032	0.031	0.074
Other multiple-vehicle collision	0.055	0.024	0.211	0.205	0.229

Worksheet 2E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Arterial Intersections

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**			**Overdispersion Parameter, k**	**Initial N_{bisv}**	**Proportion of Total Crashes**	**Adjusted N_{bimv}**	**Combined CMFs**	**Calibration Factor, C_i**	**Predicted N_{bisv}**
	from Table 12-12			from Table 12-12	from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27		$(4)_{TOTAL}$*(5)	(7) from Worksheet 2B		(6)*(7)*(8)
	a	b	c							
Total	-10.21	0.68	0.27	0.36	0.169	1.000	0.169	0.68	1.00	0.114
Fatal and Injury (FI)	-9.25	0.43	0.29	0.09	0.051	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.304	0.051	0.68	1.00	0.035
Property Damage Only (PDO)	-11.34	0.78	0.25	0.44	0.118	$(5)_{TOTAL}-(5)_{FI}$ = 0.696	0.118	0.68	1.00	0.080

Worksheet 2F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{bisv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{bisv\ (PDO)}$ (crashes/year)**	**Predicted N $_{bisv\ (TOTAL)}$ (crashes/year)**
	from Table 12-13	$(9)_{FI}$ from Worksheet 2E	from Table 12-13	$(9)_{PDO}$ from Worksheet 2E	$(9)_{PDO}$ from Worksheet 2E
Total	1.000	0.035	1.000	0.080	0.114
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with parked vehicle	0.001	0.000	0.001	0.000	0.000
Collision with animal	0.002	0.000	0.002	0.000	0.000
Collision with fixed object	0.744	0.026	0.870	0.069	0.095
Collision with other object	0.072	0.002	0.070	0.006	0.008
Other single-vehicle collision	0.040	0.001	0.023	0.002	0.003
Single-vehicle noncollision	0.141	0.005	0.034	0.003	0.008

Worksheet 2G -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Stop-Controlled Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{pedi}**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	--	--	--	--	1.00	--
Fatal and injury (FI)	--	--	--	--	1.00	--

Worksheet 2H -- Crash Modification Factors for Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
4.15	1.35	1.56	8.74

Worksheet 2I -- Vehicle-Pedestrian Collisions for Urban and Suburban Arterial Signalized Intersections

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**SPF Coefficients**					**Overdispersion Parameter, k**	**$N_{pedbase}$**	**Combined CMF**	**Calibration factor, C_i**	**Predicted N_{pedi}**
	from Table 12-14						from Equation 12-29	(4) from Worksheet 2H		(4)*(5)*(6)
	a	b	c	d	e					
Total	-9.53	0.40	0.26	0.45	0.04	0.24	0.141	8.74	1.00	1.234
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	1.00	1.234

Worksheet 2J -- Vehicle-Bicycle Collisions for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Predicted N_{bimv}**	**Predicted N_{bisv}**	**Predicted N_{bi}**	**f_{bikei}**	**Calibration factor, C_i**	**Predicted N_{bikei}**
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.406	0.114	1.520	0.015	1.00	0.023
Fatal and injury (FI)	--	--	--	--	1.00	0.023

Worksheet 2K -- Crash Severity Distribution for Urban and Suburban Arterial Intersections

(1)	(2)	(3)	(4)
	Fatal and injury (FI)	**Property damage only (PDO)**	**Total**
Collision type	(3) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J	(5) from Worksheet 2D and 2F	(6) from Worksheet 2D and 2F; (7) from 2G or 2I and 2J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 2D)	0.196	0.468	0.665
Head-on collisions (from Worksheet 2D)	0.021	0.029	0.050
Angle collisions (from Worksheet 2D)	0.151	0.237	0.388
Sideswipe (from Worksheet 2D)	0.043	0.031	0.074
Other multiple-vehicle collision (from Worksheet 2D)	0.024	0.205	0.229
Subtotal	0.436	0.970	1.406
SINGLE-VEHICLE			
Collision with parked vehicle (from Worksheet 2F)	0.000	0.000	0.000
Collision with animal (from Worksheet 2F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 2F)	0.026	0.069	0.095
Collision with other object (from Worksheet 2F)	0.002	0.006	0.008
Other single-vehicle collision (from Worksheet 2F)	0.001	0.002	0.003
Single-vehicle noncollision (from Worksheet 2F)	0.005	0.003	0.008
Collision with pedestrian (from Worksheet 2G or 2I)	1.234	0.000	1.234
Collision with bicycle (from Worksheet 2J)	0.023	0.000	0.023
Subtotal	1.291	0.080	1.371
Total	1.727	1.049	2.777

Worksheet 2L -- Summary Results for Urban and Suburban Arterial Intersections

(1)	(2)
Crash severity level	**Predicted average crash frequency, $N_{predicted\ int}$ (crashes/year)**
	(Total) from Worksheet 2K
Total	2.8
Fatal and injury (FI)	1.7
Property damage only (PDO)	1.0

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	Jordan Brooks	Roadway	Franklin St
Agency or Company	Fehr & Peers	Roadway Section	Between 14th St and 15th St
Date Performed	12/18/20	Jurisdiction	Oakland, CA
		Analysis Year	2020

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.1
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	7,780
Type of on-street parking (none/parallel/angle)		None	Parallel (Comm/Ind)
Proportion of curb length with on-street parking		--	0.8
Median width (ft) - for divided only		15	100
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	2
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed 30 mph or Lower
Roadside fixed object density (fixed objects / mi)		0	50
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	3
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.57	1.29	0.92	0.91	1.00	1.70

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	0.054	1.000	0.054	1.70	1.00	0.091
Fatal and Injury (FI)	-12.76	1.28	1.31	0.017	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.300	0.016	1.70	1.00	0.027
Property Damage Only (PDO)	-12.81	1.38	1.34	0.040	$(5)_{TOTAL}-(5)_{FI}$ = 0.700	0.037	1.70	1.00	0.064

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.027	1.000	0.064	0.091
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.023	0.662	0.042	0.065
Head-on collision	0.020	0.001	0.007	0.000	0.001
Angle collision	0.040	0.001	0.036	0.002	0.003
Sideswipe, same direction	0.050	0.001	0.223	0.014	0.016
Sideswipe, opposite direction	0.010	0.000	0.001	0.000	0.000
Other multiple-vehicle collision	0.048	0.001	0.071	0.005	0.006

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}*(5)$	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.027	1.000	0.027	1.70	1.00	0.046
Fatal and Injury (FI)	-8.71	0.66	0.28	0.004	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.143	0.004	1.70	1.00	0.007
Property Damage Only (PDO)	-5.04	0.45	1.06	0.023	$(5)_{TOTAL}-(5)_{FI}$ = 0.857	0.023	1.70	1.00	0.039

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.007	1.000	0.039	0.046
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.002	0.002
Collision with fixed object	0.500	0.003	0.813	0.032	0.035
Collision with other object	0.028	0.000	0.016	0.001	0.001
Other single-vehicle collision	0.471	0.003	0.108	0.004	0.007

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	--
Minor commercial	2	0.011	1.106	0.011	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	
Major residential	0	0.018	1.106	0.000	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.011	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.011	1.000	0.011	1.70	1.00	0.018
Fatal and injury (FI)	--	0.284	0.003	1.70	1.00	0.005
Property damage only (PDO)	--	0.716	0.008	1.70	1.00	0.013

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Calibration factor, C_r**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8		(5)*(6)*(7)
Total	0.091	0.046	0.018	0.155	0.067	1.00	0.010
Fatal and injury (FI)	--	--	--	--	--	1.00	0.010

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Calibration factor, C_r**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9		(5)*(6)*(7)
Total	0.091	0.046	0.018	0.155	0.013	1.00	0.002
Fatal and injury (FI)	--	--	--	--	--	1.00	0.002

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.023	0.042	0.065
Head-on collisions (from Worksheet 1D)	0.001	0.000	0.001
Angle collisions (from Worksheet 1D)	0.001	0.002	0.003
Sideswipe, same direction (from Worksheet 1D)	0.001	0.014	0.016
Sideswipe, opposite direction (from Worksheet 1D)	0.000	0.000	0.000
Driveway-related collisions (from Worksheet 1H)	0.005	0.013	0.018
Other multiple-vehicle collision (from Worksheet 1D)	0.001	0.005	0.006
Subtotal	0.032	0.077	0.109
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.002	0.002
Collision with fixed object (from Worksheet 1F)	0.003	0.032	0.035
Collision with other object (from Worksheet 1F)	0.000	0.001	0.001
Other single-vehicle collision (from Worksheet 1F)	0.003	0.004	0.007
Collision with pedestrian (from Worksheet 1I)	0.010	0.000	0.010
Collision with bicycle (from Worksheet 1J)	0.002	0.000	0.002
Subtotal	0.019	0.039	0.058
Total	0.051	0.116	0.167

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments			
(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	0.2	0.06	2.7
Fatal and injury (FI)	0.1	0.06	0.8
Property damage only (PDO)	0.1	0.06	1.9